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# Journal

OF THE TENNESSEE MEDICAL ASSOCIATION

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**138th Annual Meeting • Memphis, Tennessee**  
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Manuscripts must be typewritten on one side of letterweight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer. The pages should be numbered and clipped or stapled together, but they should not be placed in a binder.

Bibliographic references should not exceed twenty in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, FG: What is Known About it, J. Tennessee M. A., 35:132, 1950.

Illustrations should be numbered and identified with the author's name. The editor will determine the number, if any, of illustrations to be used with the Journal assuming the cost of engravings and cuts up to \$25. Engraving cost for illustrations in excess of \$25 will be billed to the author. They will not be returned unless specifically requested.

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## *Medicine Without an Ethic\**

REVEREND CHARLES CARROLL†

If medicine has not already, it will soon find itself defenseless—without an ethic. When the California Medical Association pronounces the erosion of the old ethic; when it claims that medicine has changed the law, public opinion and the church rather than been changed by them; when it insists that the time has come to place a relative value on human life; and finally when it pretends that medicine alone has the knowledge of human nature and human behavior to devise the new ethic, I think it time that that sweeping claim be challenged and that we ask what is happening to us—all of us.

Let us begin at the beginning and review what happened in the abortion debate.

When I returned to California in 1966 after a year in Berlin, friends approached me and asked for my views. At the time, I had not yet read the proposals before the legislature in Sacramento. Before expressing myself, I thought it best to study them. They called for abortion on five grounds; incest, rape, potential deformity, threat to the mental health, and threat to the physical health of the mother. At first blush, they made eminent good sense.

Then surely I would have appeared to be a man without compassion had I opposed abortion in the case of incest. It was only as the months wore on that I asked myself when, if ever, two parties to an incestuous relationship would seek an abortion on this ground—at risk of the attendant publicity.

And no less surely I would have appeared to be without any genuine concern for others had I opposed abortion in the event of rape. Still, I asked why there had been no distinction made between statutory and criminal rape; why a woman who had been the victim of criminal assault would not seek immediate medical care; why rape would be given as grounds for an abortion a week or a month after it had occurred.

Nothing troubled me quite as much, however, as the proposal that the right to abortion be granted on ground of potential deformity of the fetus. In reading that, the memories of a lifetime returned, particularly those of the German doctors' trial before the American Military Tribunal in Nuremberg in the late spring and summer of 1947.

It was then that I realized that incest and rape had been introduced into the discussion more because of their emotional value in debate. It was then—again mindful of how slowly but inexorably a people can move from feticide to infanticide to homicide—that I asked myself, "What, in speaking of the potentially deformed, are we saying to and about those who are deformed after birth? What are we saying to and about the totally disabled victims of automobile and industrial accidents? What are we saying to and about the totally disabled veterans of our wars?"

During a visit to the Neurosurgical Rehabilitation Center of the University of Wisconsin four years ago, I met a simply beautiful girl in her early 20s who was quadriplegic and pregnant. Because the director of the center was a friend, I asked if he would be good enough to tell me something about her. He said that she had been in an accident; that she had been paralyzed; that she had met a handsome young man some months later who asked her to marry him; that he had overcome her misgivings, she had agreed and they had been married. He then told me of a question asked her by one of

\*Presented at the 92nd Annual Meeting of the Louisiana State Medical Society, May 1, 1972, New Orleans.

†Priest, Episcopal Diocese of California; Fellow, Institute for Ecumenical and Cultural Research at St. John's Abbey and University of Collegeville, Minn.



the interns on rounds that morning.

"Enjoy your sex life?"

"No" she replied. "I lost all sensitivity in that area of my body as a result of the accident. But my husband enjoys sex. We want a family. I am pregnant. And so, I have come here to learn how I might care for our child."

You who are doctors know how often we have sent our loved ones off to war or off on a trip with good food and good wine; and you, more than most men, know how indifferent and calloused we can become in our attitudes in our brief and infrequent visits to even the most committed and sensitive when they are totally disabled.

If we are to allow potential deformity of the fetus as ground for an abortion, what are we saying to and about the irreversibly mentally ill? One of the ugliest chapters in German medical history; one which pales only in comparison to the extermination of the 6,000,000 Jews in the gas ovens of the Third Reich was written by German psychiatrists who, in German mental hospitals, liquidated 240,000 of their 300,000 German patients in specially constructed carbon monoxide chambers during the years of World War II. Deformity can mean many things. Early in the Nazi period, it meant "Jewish," later it came to mean other things. But as Hermann Goering could say, "Who is a Jew is for me to decide." When he needed a Jewish intellectual, he would want, (and later, unwanted) him—without need of law or definitions. Where there is no ethic, there is only one law—that of power—naked, brutal, ruthless power.

Threat to the mental health of the mother was advanced as a ground for abortion though mental health was not defined. As one of the psychiatrists at the University of California Medical Center in San Francisco said to me shortly before I left last year, "Charles, where are we headed? What are we doing? My profession had best look to its own reputation. There were times not long ago when I would have authorized an abortion, for example, in a case of manic depressive psychosis. We have moved far beyond that. We are granting abortions upon request to the denigration of psychiatry and our own good name."

Threat to the physical health of the mother was also advanced as a ground. And this, at a time, when medicine had scored as great and

significant advances as any in its long history and when such threats were minimal. Moreover, no state would have denied the physician the right to perform an abortion if he were faced with the terrible choice of taking one life in order to save the other.

What has caused me the greatest concern, however, is not the almost complete acceptance of these proposals in California. Then, the potential deformity provision was deleted. It was rather the editorial which appeared in *California Medicine* in September, 1970, to which I have already alluded.

The first of many "eye-openers," this appeared in the official *Journal of the California Medical Association*. It not alone claimed the right to formulate the new ethic to which we would all be asked to submit. It claimed that right for the community of medicine alone. It insisted that this ethic should be based on the scientific method and that it should be devised by scientists and scientists alone. At that point, I began to see ever more clearly how much this claim was merely an echo of a far more profound and sophisticated argument which even then was reverberating throughout the worldwide community of the life sciences.

Konrad Lorenz, the Viennese zoologist, in his book *On Aggression*, had made precisely the same demand, calling for a new and becoming humility from all disciplines other than his own. And he, who spent the better part of his life in Central Europe, did this in writing on aggression (the book's original title being *Das So-Gennante Boese: Zur Naturgeschichte der Aggression or So-Called Evil: Concerning the Natural History of Aggression*), mentioning Alexander and Caesar; yet never in 300 pages mentioning Lidice or Oradour, Auschwitz or Dachau, Himmler or Hitler.

More recently, Jacques Monod, a biologist and Nobel Laureate from France made much the same claim. In his book, *Chance and Necessity*, he called Jew and Greek, Christian and Marxist, in short, all of those who stood in the millenia—old Western tradition-animists. Discounting all of the contributions made by the humanities in the past and coming as close as any man in the scientific community to embracing a doctrine of absolute biological determinism, he, too, has insisted that science and science alone has the right to determine man's future.



Amidst all of these calls for sweeping change, it is interesting to note that some Germans have not yet forgotten the *recent* past. They have learned the high price that is inevitably paid when human life is denigrated and the individual's claim to membership in the *humanum* is subject to periodic review by a whimsical authority. When the German Democratic Republic, early this year, legalized and offered to subsidize abortion, the Lutheran and Catholic bishops stood as one in opposition. Now, in the Federal Republic where a similar measure is before the Bundestag, the Catholic and Lutheran bishops have again taken their stand together.

Not all Germans need to be reminded, as William L. Shirer reminds the readers of *The Rise and Fall of the Third Reich*, of the wisdom of George Santayana; "Those who do not remember the past are condemned to relive it." To those who have remembered and do remember our debt is incalculable.

In reading a series of essays published last year in Munich by some of the most eminent physical scientists, life scientists, lawyers, philosophers and theologians of Germany and Switzerland (a collection which I trust will soon be translated into English) I, for one, became still more keenly sensitized to the debate on human values, provoked by the abortion controversy. In this anthology entitled *Menschenzuechtung: Das Problem der genetischen Manipulierung des Menschen*, (*Human Breeding: The Problem of the Genetic Manipulation of Man*), mention was made of Gordon Rattray Taylor's *The Biological Time Bomb* not once but many times. Sensitive to his words and their meanings, they captured the full impact of what he had written much of which had been lost upon me. A scientific journalist, he wrote of the prospects of genetic engineering, the possibility of test tube babies, and the likelihood of defective embryos appearing in the first stages of experimentation. Then he declared: "The necessity of destroying the defective embryo which constitutes abortion under present laws in many countries, will no doubt arouse resistance. Those countries who do not consider destruction of the embryo to be abortion until after the fifth month of pregnancy, or some other stated period, will, therefore, be at an advantage." (p. 183)

It was not lost upon the Germans that these words precede Taylor's subchapter on "The

Spectre of Gene Warfare"—not nuclear, not chemical, not biological, but *gene warfare*.

In a world in which man is made for science rather than science made for man, those who seek abortion on demand of the woman—indeed, all of us—had best ask ourselves if abortion on demand of the state *and* sterilization on demand of the state *and* euthanasia on demand of the state can be far away. In a world in which men and women are being manipulated by fears of a population explosion and a genetic apocalypse, there has been much concern for Spaceship Earth, but little for the crew.

Within the American scientific community, these fears have no more articulate spokesman than Garrett Hardin, professor of biology at the University of California at Santa Barbara, and former president of the American Academy for the Advancement of Science.

Let us examine what he has written and said over the last four years. In *Science* on December 13, 1968, he wrote on "The Tragedy of the Commons." Comparing the loss of the public grazing lands in England (because of population increase) to the loss of the wide open spaces in the American West (because of its exploration, settlement and increased use), he sees the world suffering the same threat—overpopulation.

Two years later, in the same magazine, on July 31, 1970, there appeared an editorial of which he was the author entitled "Parenthood: Right or Privilege?" In this, he made it unmistakably clear that he considered parenthood a privilege granted by society rather than a right enjoyed by man. Eloquent testimony to the change which he himself had undergone—from statement of the problem to proposal for its solution—he left little doubt that mandatory rather than voluntary controls would be needed.

How ardently he espouses this cause is underscored by Richard Neuhaus, former pastor of the Lutheran Church of St. John the Evangelist in Brooklyn, author of *In Defense of People*, recently published by Macmillan. Neuhaus writes of a symposium held in New York City in 1970. Hardin, one of the principal participants, poses the problem, as he sees it, in the form of a mathematical equation: "Population X Prosperity = Pollution." Then, according to Neuhaus, Hardin adds: "To reduce



pollution, one must reduce either population or prosperity, and it is better to reduce population rather than prosperity." (p.186)

All this happened in the summer of 1970 when the United States Bureau of the Census released a report which admitted that its 1967 projection of the United States population in the year 2000 was an *overestimate* of 100,000,000 (*San Francisco Chronicle*, August 13, 1970, p. 1) and this—in the richest nation in the world which has some of the best, if not the best, computers and computer scientists in the world.

On February 15 of this year, in *Internal Medicine News*, Hardin is reported to have gone even further. He not alone takes the view that voluntary population control is self defeating. He contends that "the desire and/or ability to use contraception effectively as a trait . . . will be perpetuated in the offspring who do so": and he sees "the lack of this desire and/or ability perpetuating (itself) in the offspring of those who do not." Surely, it would be difficult to find a more unequivocal statement of absolute biological determinism and/or a doctrine of man which represents a more radical reduction of man to a molecular system. Implying that the individual is genetically programmed to contracept or not to contracept by his forebearers, he believes that it is "poorer people, those who come from a long line of poor ancestors, and are apparently unable to better themselves who are least motivated to use contraception." One of the rationales for mandatory controls, apparently, would be the presence of genes within certain groups in the population that were adapted to the "culture of poverty."

If anyone can believe that the "new ethic" will be without its political, economic and social implications, let him think on these things. There could be no more dramatic portrayal of the interrelationship of each and every problem and issue now encountered by the life sciences and the community of medicine.

Let us take two—abortion and sterilization. Today, doctors are doing two things, only one of which they did before. Loyal to the Hippocratic Oath, the Nuremberg Code or the Helsinki Declaration, they, in times past, often agreed *not* to do what a patient asked *not* be done. Then, a doctor on occasion, tells a woman patient that the results of a biopsy are positive; that her breast tumor is malignant; that it may well have metastasized. It is not unusual for

him to respect her decision when she refuses a mastectomy. Now, however, the doctor *is* doing what he *is* asked to do. And, given the temper of the times, and pressured by a society in which the legal has become moral, some are doing so in violation of their own ethics and their own consciences. Admittedly, we live in a period of change, in a revolutionary era. But what will happen to the doctor who bows to the mood of the moment *when* the state demands of him what his patient has demanded—and received? What will there then be to defend him—without an ethic?

There is good reason to fear for the future of medicine in this country. It is one thing to pronounce the demise of the Judaeo-Christian ethic, as the California Medical Association has done. It is quite another to say that a new ethic is needed but not specify what that ethic should be. Order without freedom is tyranny. Freedom without order is chaos. If you have any doubts, read the history of Japan during the 20 years armistice (1919-1939), the history of Germany (1919-1933), the history of the French Republic (1919-1940). In the "no-man's land" between the alleged death of the old ethic and the birth of the new, in a time without an ethic which is commonly held and commonly honored, who speaks for medicine? The doctor? The patient? And by what ethic does doctor *or* patient defend himself?

When we succumb to fear of a genetic apocalypse; when we decry the "pollution of the gene pool"; when we claim that amniocentesis is an infallible diagnostic tool; when we demand prenatal examination of the unborn, what is there to prevent abortion of the woman whether she wishes to be aborted or not? Can we not admit, if only to ourselves, that when we talk of such things and contemplate the ways and means by which we might "improve the gene pool," we are talking about denying some the right to participate in the reproductive process and, if only by implication, we are talking about the "drafting" of others?

When the physician, for example, agrees to sterilize every patient at his or her insistence, what is there to protect the physician or patient when it is the state that insists?

Let us examine what has happened in our courts in the last 50 years.

In 1927, in the case of *Buck v. Bell* (274 U.S. 200, 47 S. Ct. 584, 71 L. Ed. 1000),



Mr. Justice Oliver Wendell Holmes read the majority opinion of the United States Supreme Court. The court, having been petitioned for the right to sterilize a retardate in the Commonwealth of Virginia, granted the petition on eugenic grounds. Holmes' words on that occasion—"Three generations of imbeciles are enough"—have not been forgotten. What has been forgotten, however, is that his interest in eugenics was inspired by his father; and his father's knowledge of eugenics was gained in the last quarter of the last century.

In 1962, in the case known as "In Re Nora Ann Simpson," Judge Holland M. Gary of the Probate Court of Zanesville County, Ohio, decided to grant a mother the right to have her daughter sterilized. The daughter, who was a young, attractive retardate, had been impregnated and delivered and her child had been put up for adoption by a public welfare agency. The court, while citing *Buck v. Bell*, found still other—perhaps more important—grounds for sterilization. "To permit Nora Ann to have further children," the judge declared, "would result in additional burdens upon the county and state welfare departments . . ." (180 North Eastern Reporter, 2d. Series 206). With that, *cost benefit analysis by judicial authority* entered the practice of medicine.

Why do I fear this trend? Because I have heard men in California, men of high ideals and noble purpose, ask quite openly and with disarming honesty whether we have the right to maintain the thousands of retardates at Sonoma State Hospital—in view of the burden their care imposes upon the welfare budget of California.

With this, the question before the house becomes something quite other than it had been in the days when the Hippocratic Oath was honored. The question now is: "Who Is Human?" When we start to count mouths on one hand and food supplies on the other, we will inevitably talk first of the quantity of life; then, of the quality of life. But who is to define "quality?" Who is to have the power to declare the other "wanted" or "unwanted?" To what branch of government—executive, legislative or judicial—shall we entrust the power to define; to "want" and "unwant"? What branch shall develop policy? What branch shall implement that policy? What agencies shall enforce the laws? Are we moving inexorably

toward that day when the individual's claim to membership in the *humanum* is subject to periodic review and his ability to pass the test dependent upon his productive capacity and his value to society? By what standards does society judge an individual to be productive? By what value system does society accord his life value?

When I contemplate the extremes to which some very sane men are willing to go to avoid a genetic apocalypse, I recall my meeting with a retired professor of zoology in Berkeley last year. A man of gentle mien who had taught for many years at one of the state colleges in California, he asked, "Would you approve the liquidation of all diabetics?"

"Of course not," I replied.

"Neither would I," he continued, "but would you approve the sterilization of all diabetics?"

"No," I answered.

"Then," he declared, "prepare yourself for a world population that, within a hundred years, could well be 50 percent to 60 percent diabetic."

I make no claims to expertise. But I do have some friends who are expert. When I returned to the University of California Medical Center, I called upon one of them, Dr. Peter Forsham, an endocrinologist and head of the metabolic unit.

"Peter," I began, "you have had diabetes since your early teens. As a young man, you were doubtlessly told that you had a life expectancy of 40 years. You, as I, are now 55. Is there any merit to the dire prediction made me by this zoologist?"

"Charles," he answered, "I will tell you this. Within five years, I will be able to take the islet of Langerhans from the pancreas and transplant it to the kidney. Then the diabetic will again produce the insulin he needs."

"But," I added, "you have not discussed the sperm count."

"For that," he concluded with a wry smile, "I would ask ten more years."

It is not my intent to interpret Dr. Forsham's words for others. They may be differently interpreted by different people. Still, I do not find him living in an Aristotelian or Newtonian universe but rather an Einsteinian universe; his world, not one of Euclidean but rather Riemannian dimensions. Conscious of the finitude of man and conscious of finite man's limitations within the space time continuum, he has applied

some of the insights of the physical sciences to his study of the life sciences. And appreciative of the hard-won insights of the humanities, he accepts the fallibility of all human prediction and concentrates upon the elimination of disease rather than the sterilization of the disease bearer.

Unhappily, however, the contrary assumption, the assumption of inerrancy is rather widespread. In *The Atlantic* in May, 1971, Edward Grossman, a student of George Wald at Harvard, wrote an article on "The Obsolescent Mother." In reading it, I asked myself—without the slightest desire to be facetious—if the penis envy of the woman, so well described by Sigmund Freud, had not been succeeded by the womb envy of the man, for surely the geneticist's attempt to effect an absolute divorce between sexual enjoyment and sexual reproduction through the production of life *in vitro* could minimize if not eliminate the role of woman from the reproductive process altogether.

Grossman suggests and supports the development of an "efficient artificial womb" in the hope that, if it catches on culturally, "it will mean that the awe-fulness associated with pregnancy and childbirth will have nothing to feed on, and motherhood, if it continues to excite any awe at all, will not do so more than fatherhood." Furthermore, he insists that the mother "will find that society does not expect her to have a special relation to her offspring" and that a "society that can grow fetuses in a laboratory will be more disposed to have meaningful day—and night—care centers and communal nurseries on a large scale for the state, being a third parent, will wish to provide for the maintenance and upbringing of its children." Then, natural pregnancy may become an anachronism . . . The uterus will become appendix-like." (pp. 48-49).

Immediately following Grossman's article in *The Atlantic* there was one by James D. Watson, professor of molecular biology at Harvard, a Nobel Laureate, and one of the co-discoverers of the genetic code, the secret of DNA. His was quite a different spirit.

In posing the question: "Moving Toward The Clonal Man: Is That What We Want?" he undertakes a measured review of the advantages and disadvantages of test tube conception. Then he makes this sober plea: "This is a matter far too important to be left solely

in the hands of the scientific and medical communities. The belief that surrogate mothers and clonal babies are *inevitable* because science always moves forward, and an attitude expressed to me recently by a scientific colleague, represent a form of laissez-faire nonsense. . ."

"I would thus hope" he concludes, "that over the next decade wide-reaching discussion would occur . . . about the manifold problems which are bound to arise if test tube conception becomes a common occurrence . . . Admittedly the vast effort . . . will turn off some people—those who believe the matter is of marginal importance now, and that it is a red herring designed to take our minds off our callous attitudes toward war, poverty and racial prejudice. But if we do not think about it now, the possibility of our having a free choice will one day suddenly be gone." (p. 53)

*TO SUM UP:* Medicine without an ethic; the law without a norm; and the religious community without a theology of life and death, man and nature; will leave people—without a defense. This is particularly true in a world in which so many are willing to sacrifice the other rather than sacrifice *for* the other.

*For those in the community of medicine*, the holocaust should provide sufficient warning. When Hitler came to power, the only oath that had been required of a German physician was one of loyalty to the Weimar Constitution. That was later supplanted by an oath of loyalty to Hitler alone. Without an ethic, German medicine was defenseless.

*For those in the community of law*, the motion picture, "Judgment of Nuremberg" should provide a *caveat* all its own. When, in the last moments of that film, the German Judge Jan-ning runs to his cell door and, grabbing the bars, shouts to his American colleague, Judge Haywood, "I did not know it would come to that. You must believe it. You must believe it." Haywood first stares at him and then, almost without thinking, he spoke to him as though he were speaking to a child, "Herr Jan-ning. It came to that the first time you sentenced to death a man you knew to be innocent." (*Judgment at Nuremberg* by Abby Mann, p. 136). Without a norm, German law was defenseless, a mere tool of the tyrant's will.

*For those in the community of religion*; the words of Elie Wiesel in *Night* should provide a present day reminder of what happens to the



man who pronounces God is dead. In this an account of his days at Auschwitz, he recounts the hanging by the SS of two adults and a child, the child "with the face of a sad angel." The adults, he writes, died quickly, the weight of their bodies speeding their deaths. But the child?

"For more than half an hour he stayed there, struggling between life and death, dying in slow agony under our eyes. And we had to look him full in the face. He was still alive when I passed in front of him. His tongue was still red, his eyes not yet glazed.

"Behind me, I heard . . .  
"Where is God now?"

"And I heard a voice within me answer him:  
"Where is He: Here He is—He is hanging here on this gallows." (p. 76)

Wiesel's words are strangely reminiscent of another Jew who was crucified between two thieves. (Matthew 25:34-35). Without a theology that calls each man to see the Wholly Other in his neighbor, the German people—Jew and Christian, believer and unbeliever—were defenseless.

This is *the* Truth that sets men free. It was then. It is now.

Reprinted from *The Journal of the Louisiana State Medical Society*, Sept., 1972.

\* \* \*

(continued from page 44)

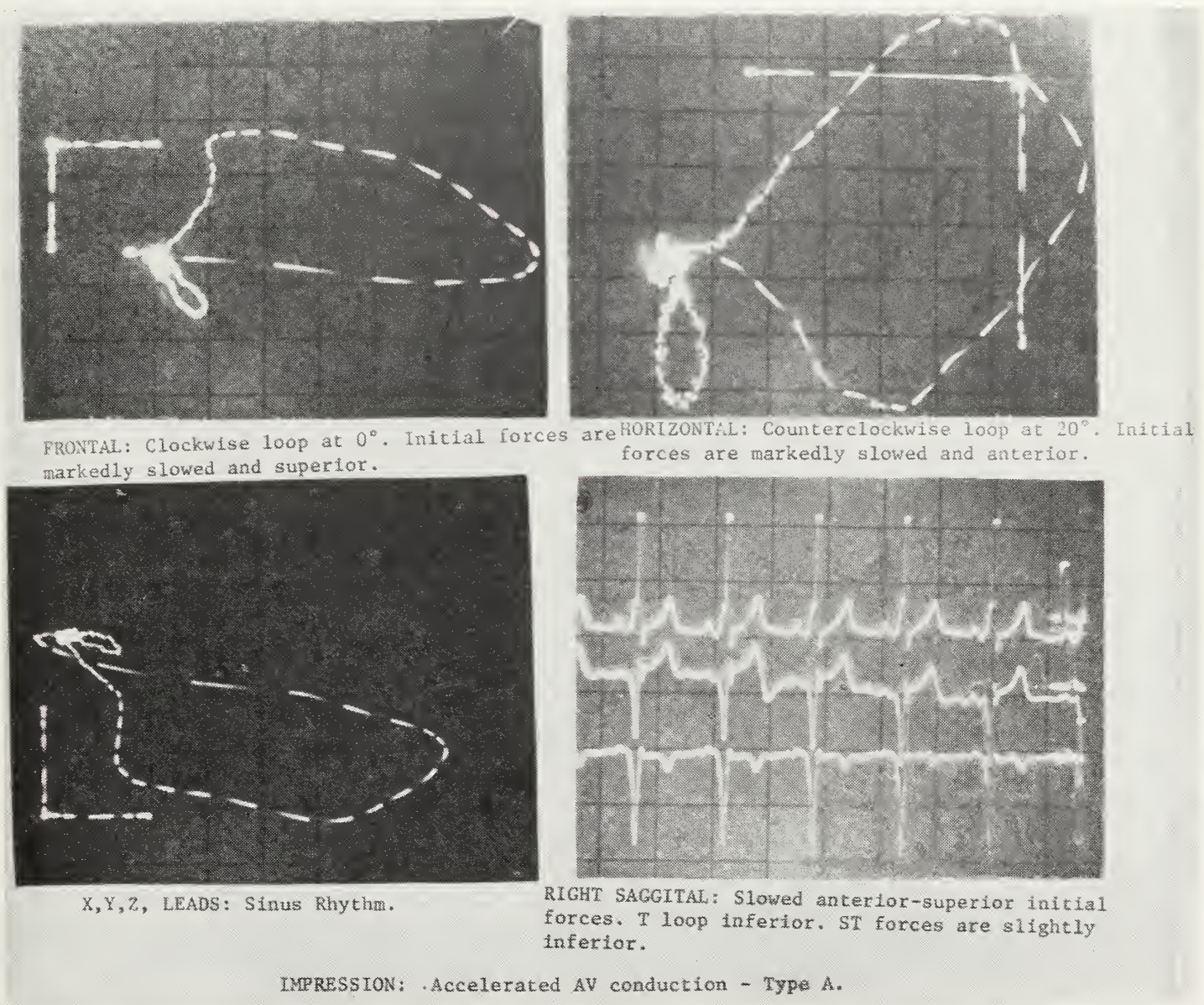


FIG. 3



# *Reach to Recovery: A Postmastectomy Rehabilitation Program*

JOHN L. SAWYERS, M.D.\*

The Reach to Recovery Program of the American Cancer Society is a rehabilitation program for women who have had partial or complete breast amputation. The program is designed to meet their psychological, physical and cosmetic needs. It is estimated that one in 20 women over 40 years of age will develop cancer of the breast. At the present time in the United States over 500,000 women are living who have had a mastectomy for breast cancer. The operation does not impair the patient's general health, but the emotional and physical impact can be temporarily devastating. The Reach to Recovery Program helps the patient and her immediate family to see the operation in its proper perspective and, in cooperation with the patient's physician, to accomplish an effective, rapid rehabilitation following mastectomy.

This program, originated by Mrs. Terese Lasser in 1953 with funds made available by her late husband, J. K. Lasser, started as The Reach to Recovery Foundation and has now become a rehabilitation program of the American Cancer Society. The Reach to Recovery Program was introduced into Tennessee by the Nashville-Davidson County Unit of the American Cancer Society in 1968 by Mrs. Dodie Allman, a registered nurse and former mastectomy patient, who initiated the program in the Nashville hospitals. It was immediately accepted with enthusiasm by surgeons and patients. Within three years, programs had been activated in Memphis, Knoxville, Morristown, and Chattanooga. Volunteers are now available throughout the state.

The Reach to Recovery Program enables the physician and surgeon to provide mastectomy patients with specialized assistance without cost and without interfering with the doctor-patient relationship. When permission is given by her doctor, the mastectomy patient is visited by another woman who has had the same operation.

The patient sees that it will be possible for her to look normal and to return to her usual activities.

Only specially selected and trained volunteers may call upon mastectomy patients. These volunteers are former mastectomy patients who have demonstrated a desire to help other patients who have had similar surgical procedures. Because of her personal experience and her successful adjustment, the volunteer is in an unique position to give the patient information about those things which the patient may hesitate to discuss with her physician—such as adjustments which can be made in clothing, names of bra fitters at department stores, and reaction of her husband and teenage children.

When the volunteer visits a patient in the hospital, she provides a gift of a Reach to Recovery kit. This kit contains a manual with information for the patient and her family, a ball and rope for exercises and a temporary breast prosthesis for the patient to wear home when leaving the hospital. The volunteer, with permission of the patient's surgeon, demonstrates and explains exercises to improve arm and shoulder motion. Suggestions are given for bra comfort and explanation of various breast forms as well as clothing adjustment. Where indicated, personal problems are discussed, but volunteers never answer medical questions or make comparisons of operations. The volunteer leaves her phone number with the patient so that she may be contacted for further assistance if needed. The volunteer will accompany the patient for fitting with a regular prosthesis after the patient has been told by her doctor that she is ready. Clothing, particularly bathing suits, is discussed. No products are sponsored, nothing is ever sold to a patient, and patient names are kept confidential.

Unlike the ostomy and laryngectomy rehabilitation programs, Reach to Recovery is not a club. The woman is encouraged to return to her normal way of life as soon as possible. Mastectomy patients are assured that they are just as much a woman as ever. The volunteer offers

\*Chairman, Professional Education Committee, Tennessee Division, American Cancer Society.

living proof to the patient that she can return to a normal life.

The main thrust of the program is aid to the patient, but benefits accrue to the surgeon and physician. Reach to Recovery offers a service which the busy, overworked physician may make available to his patients and which will save him time for himself and his staff. This assistance is provided without cost and without interfering with the doctor-patient relationship.

The Reach to Recovery Program also educates personnel responsible for the comfort of the mastectomy patient. Lectures and demonstrations are given to nursing students, medical students, social service workers, and other interested personnel. Volunteers have talked to graduate nurses for their in-service training and to hospital medical staff physicians. During these talks the Reach to Recovery volunteer demonstrates postmastectomy exercises, shows prostheses and how they are worn, and demon-

strates clothing and cosmetic devices for disguising discolorations and scars. Most importantly she instills into the audience an awareness of the patient's reaction to her operation.

The Reach to Recovery Program has proved its usefulness in rehabilitation of the mastectomy patient. It deserves the support of the medical profession. Surgeons should ask for Reach to Recovery volunteers to visit their postmastectomy patients in the hospital and should urge their well-adjusted, cured mastectomy patients to become volunteers.

Additional information and literature on the Reach to Recovery Program in Tennessee may be obtained by calling or writing the American Cancer Society, Tennessee Division, 2519 White Avenue, Nashville, Tennessee 37204. Local unit offices of the American Cancer Society will also supply information regarding this rehabilitation program.

\* \* \*

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# The Treatment of Status Convulsivus And Epilepticus in Children<sup>†\*</sup>

HAROLD CAYCE WALDREP, M.D., and J. T. JABBOUR, M.D.

Convulsions are the most common sign of functional disturbance of the central nervous system. This is confirmed by the fact that more than eighty percent of convulsive disorders begin during the first decade and also because six percent of all children have a history of one or more convulsions. The convulsion in a child is both a frightening experience for the parents and a diagnostic and therapeutic challenge for the physician. It is well known that early control of convulsions in childhood is vital in preventing residua, such as hemiplegia, recurrent convulsions, behavior disorders, or even death in children.

Status epilepticus is a condition of repetitive, prolonged seizures, during which a state of unconsciousness persists between seizures. Status convulsivus is a condition of serial or repetitive seizures without altered consciousness.

- which is the primary cause of the seizure;
- 2. Maintenance of an open airway with adequate pulmonary ventilation;
- 3. Adequate oxygenation and maintenance of circulation;
- 4. Prevention or reduction of cerebral edema; and,
- 5. Prevention or reduction of complications, such as hyperpyrexia, dehydration, infection, and electrolyte problems.

The immediate and subsequent complications of convulsions are shown in Table 1. These may give a clue to the problem of management of acute convulsions. The increased neuronal activity from any cause, acquired or genetic, produces an abnormal epileptogenic discharge above the seizure threshold, resulting in seizures. This increased muscular and secretory gland activity causes accumulation of secretions

TABLE 1  
COMPLICATIONS OF STATUS CONVULSIVUS AND TREATMENT

<i>Complication</i>	<i>Treatment</i>
1. Pulmonary	1. Keep airway open 2. Give oxygen if there are signs of cyanosis and hypoxia, (2-4 lit/min)
2. Hypotension	1. Phenylephrine, 5 mg. IM, or 0.5 mg. IV, OR 2. Methoxamine, 10-15 mg. IM or 5-10 mg. IV
3. Hyperpyrexia	1. Alcohol and ice water sponge 2. If seizures continue with hyperpyrexia, suggesting cerebral edema, hypothermia should be induced with dehydrating agents (a) Infuse mannitol solution in a dose of 2-4 gm./kg. at a rate of 60 drops/minute. (b) Intermittent use of hypertonic glucose solution for cerebral edema, with maintenance of fluid intake by dextrose saline solution, is recommended in protracted seizures.

The immediate problems encountered in the management of the child with convulsions include:

1. Control of the abnormal neuronal activity

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\*A study performed while on the Pediatric Neurology Elective (HCW).

and obstruction of the respiratory airway. Increased muscular tone during this period also causes interference with cerebral blood flow and venous congestion, with the accumulation of metabolites which cause cerebral vasodilatation and a decrease in cerebral circulation, resulting in hypoxia and cerebral edema. The decrease in cerebral circulation with hypoxic cerebral damage may eventually result in cerebral throm-

bosis and infarction, which lead to permanent residua.

TYPES OF DRUGS

The abnormal neuronal activity can be controlled by several different drugs which have anticonvulsive effects on the central nervous system. The depressant effects of the drugs are not without adverse and variable reactions. These should be familiar to the physician. The drugs available which have been in use in the treatment of convulsive disorders include the following:

1. *Anesthetics*

Inhaling

Ether

Halothane

Intravenous

Thiopentone

Methohexitone
2. *Anticonvulsants*

Barbituric acid

Derivatives

Nembutal

Seconal

Amytal

Phenobarbital

Hydantoin

Diphenylhydantoin

(Dilantin)

Diazepam

Valium

ANESTHESIA

*Ether* has been used for many years as a safe inhaling anesthesia. To be effective as an anticonvulsant, surgical levels of anesthesia must be achieved. At this level, there is a depression of cortical activity and a reduction of conducted impulses. Side effects include irritation of the mucous membranes, coughing, vomiting, and transient hypertension.

*Halothane*, one of the newer inhalant anesthetics, is about five times as potent as ether. As with ether, it may be used as an anticonvulsant if given to the extent of producing surgical anesthesia. This gas is not as irritating to the mucous membranes though respiratory depression and hypotension are major side effects of Halothane induction if not properly administered.

These two gases should be administered by those who are trained in the practice of administering anesthesia. An anesthetic death resulting from an attempt to treat status epilepticus can be avoided by using such personnel, precautions, and equipment.

ANTICONVULSANTS

*Valium (Diazepam)*: This is a benzodiazepine derivative which is used for the treatment of anxiety and for skeletal muscle relaxation. The major focus of central depressant action is on the spinal reflexes and the brain stem reticular system. Valium depresses the duration of electrical after-discharge in the limbic system, the amygdala, and the hippocampus. The metabolic rate has been studied and its action is of rapid onset and short duration. Following a single dose of the drug, a portion is rapidly excreted (half life of 7-10 hours), while the remaining portion is excreted slowly (2-8 days). It is absorbed, peaks, and is excreted at approximately the same rate by oral, intravenous, or intramuscular administration. Seventy percent of the metabolites are excreted in the urine.

*Barbiturates*: Whereas the gases must be given to levels of surgical anesthesia to stop a convulsion, barbiturates act specifically as an anticonvulsant and therefore need not produce a state of sedation. Their action is not completely understood. Generally, barbiturates appear to have their greatest depressant action on the multineuronal systems, effectively blocking conduction through the reticular system; this results in suppression of cortical arousal, and barbiturates may act on the neuronal membrane in such a manner as to increase the membrane threshold to repetitive stimuli.

Because phenobarbital is degraded by the liver and excreted by the kidney, it must be used cautiously in patients with either hepatic or renal dysfunction. Slow intravenous administration is recommended to prevent acute cardiorespiratory depression.

*Paraldehyde*: This is a safe drug for use as an anticonvulsant. Even at toxic levels there is no significant depression of the respiration and systemic circulation. Nevertheless, paraldehyde should be used cautiously in a dosage of 0.15 to 0.3 ml/kg, IM or IV. Because it is highly irritative and may cause muscular necrosis, a maximum dosage of 3 cc. is given at any one site. Approximately eighty percent of the drug is metabolized by the liver; therefore, it must be used cautiously in patients with hepatic disease.

*Dilantin (Diphenylhydantoin)*: Through an unknown action on the neuronal membrane, Dilantin inhibits the progressive spread of seizure discharges in the brain. This exogenous



pharmacologic stability results in a reduction of neuronal irritability and activity. Although Dilantin suppresses the transcortical spread of electrical activity from one area to another, it does not prevent spread from the centrencephalon, which is responsible for bilateral synchronous paroxysms.

Dilantin has no sedative effects, except in large doses, and its side effects are used to determine therapeutic doses. They include nystagmus, ataxia, and lethargy. Gum hyperplasia is common, but hematologic effects rarely occur.

After the initial therapy has been started to control the seizure activity, the diagnostic evaluation, noted in Table 2, is often helpful.

The treatment of the acute convulsion varies with the various studies which have been re-

ported in the literature. These findings are presented in Tables 3 and 4.

TABLE 2  
DIAGNOSTIC EVALUATION

1. Electrolytes, Ca, phosphorus, BUN, fasting blood sugar, sodium, potassium;
2. Skull, sinus, and chest films, bone survey;
3. Electroencephalogram;
4. Cerebrospinal fluid studies;
5. Toxicity studies (serum or urine);
  - (a) thallium
  - (b) lead
6. Viral studies;
  - (a) neurotropic battery
  - (b) respiratory battery
  - (c) Herpes simplex titers
7. Brain scan and cerebral angiogram.

TABLE 3  
THE EFFECTIVENESS OF VARIOUS DRUGS IN STATUS CONVULSIVUS

<i>Study</i>	<i>Drug</i>	<i># Of Cases</i>	<i>Effective Control of Seizures</i>	<i>% Effective</i>
Sciarra	Amytal IV	7	5	71%
	Paraldehyde IV	5	3	60%
	Ether	5	2	40%
	Phenobarbital IV	23	3	13%
	Phenobarbital IM	33	4	12%
McGreal	Paraldehyde	16	12	75%
	Phenobarbital	14	8	57%

TABLE 4  
RECOMMENDATIONS OF SPECIFIC THERAPY FOR STATUS CONVULSIVUS

<i>Study</i>	<i>Drug</i>	<i>Recommendation</i>
Murphy & Schwab	Dilantin	100 mg./70 lbs. (3 mg./kg.) IV
Berg & Yannet	Phenobarbital Sodium IV	To be given in any seizure lasting longer than twenty minutes. Initial dose of 4-7 mg./kg., with a half of the initial dose repeated at 20-30 minute intervals until a maximum of 15 mg./kg. has been given.
Chao	Nembutal IV Phenobarbital Sodium IM	Give Nembutal, 4-5 mg./kg. IV, and phenobarbital, 3-6 mg./kg. IM simultaneously. (If the patient has respiratory or general depression complications, give paraldehyde, 0.3 cc./kg. IV instead of Nembutal.)
Carter	Phenobarbital Sodium IV	Sixty to 100 mg. in infants under one year; 120-200 mg. for children between 2-5 years; up to 300 mg. for older children.
Lombroso	Valium IV	2-5 to 10 mg. injected slowly over one to 10 minutes.

TABLE 5  
RECORDED TREATMENT OF STATUS CONVULSIVUS

Condition	Immediate Convulsive Therapy
1. First seizure less than 20 minutes	1. Valium, 0.5 mg./kg. IV for immediate control. 2. Phenobarbital, 4-7 mg./kg. IV. 3. Paraldehyde, q15 mins, IM, if the Valium and phenobarbital are ineffective. 4. Maintenance control as needed.
2. (a) History of prolonged seizures (longer than 20 minutes) or (b) Discontinuation of medication	1. Valium, 0.5 mg./kg. IV for immediate control. 2. Phenobarbital, 3-5 mg./kg. IV (should be diluted to about 2.5% so that have 10-25 mg. of barbiturate per cc.). Must be given slowly in order to avoid respiratory depression. 3. Phenobarbital, 5-6 mg./kg. IM. 4. ± (In case of respiratory depression, substitution of paraldehyde for barbiturate is indicated in a dilute solution of 20 cc. paraldehyde in 200 cc. of normal saline, IV.) 5. Maintenance control as needed.

The choice of treatment of status epilepticus is as variable as the individual studies. The choice today utilizing several medications, but especially Valium, is summarized in Tables 5 and 6.

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TABLE 6  
TREATMENT OF STATUS EPILEPTICUS

Supportive:	(1) Maintain airway (2) Clear Secretions (3) Position to prevent aspiration (4) Start I.V. (preferably with intracatheter)
Seizure:	Valium, I.V.
Cessation of Seizures:	Phenobarbital, 5 mg./kg./day 1st dose I.M., then q6h Dilantin, 5-10 mg./kg./day ½ of daily dose first I.V. slowly
Seizures Recur:	Intubate with respirator present Phenobarbital, I.V. until seizure stop
Seizures Persist:	General anesthesia, 1-2 hours (ether, cyclopropane)

\* \* \*

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## Vanderbilt University Hospital, Nashville\* ENTEROCOLITIS IN AN INFANT

DR. DAVID S. ZAMIEROWSKI—This female infant was first admitted to the Vanderbilt University Hospital at six weeks of age. She weighed 8 pounds 2 ounces at birth and was the product of a full-term pregnancy. The mother had been well throughout the pregnancy except for persistent monilial vaginitis. Both the mother and the child were discharged from the hospital three days following delivery. The baby was started on breast feedings and was begun on cereal and fruit two weeks later. At approximately one week of life the baby began to have what the mother described as constipation with the passage of one firm bowel movement daily initially and then only every other day after about two weeks. At about this time the mother began to give the child frequent soapsuds enemas in order to encourage bowel movements. This continued until approximately five weeks of life. At three weeks of age the baby was noted to have patches of *Candida* on the mucous membranes of the mouth, since which time the baby had been quite fussy and appeared to be in pain. On this account, the child was given paregoric for colic daily until the time of admission. Three days prior to admission the baby began to have severe diarrhea which gradually progressed and necessitated her admission to the hospital at six weeks of age.

*Physical Examination:* Her temperature was 99°, pulse was 130, respiration was 44 and BP was 90/50. On admission she was normally developed but was dehydrated and lethargic. Patches of *Candida* were present in the mouth and a *Candida* rash was present on the face, neck, and especially on the arms. The fontanelle was soft and slightly depressed. The abdomen was flat, without tenderness. No organs or masses were felt. The remainder of the physical examination was negative.

*Laboratory Studies:* Admission HCT was 34%, Hgb 10.7 gm, WBC count 15,400 with 65% PMN, 36% lymphocytes, and 1% monocytes. Urinalysis was normal. Glucose was 124 mg%, BUN 8 mg%, sodium 129, potassium 3.7, chloride 109 mEq/L, CO<sub>2</sub> 13.5 mM/L, and serum protein 4.5g%.

Chest x-ray, initial abdominal films, and barium enema were normal except for what was described as questionable colon enlargement. Follow-up abdominal x-rays on the eighth hospital day demonstrated air-fluid levels in the small intestine, but no definite site of obstruction was noted.

*Hospital Course:* Over the first two days of hospitalization the child began to run a spiking fever to levels as high as 103° and diarrhea became much worse with the passage of 12 green watery stools each day. Intravenous fluids were run at a rate of 3000

ml/m<sup>2</sup>/24hr. Initial cultures of the nasopharynx, urine, blood, and cerebrospinal fluid had no growth. The stool had no pathogenic organisms isolated, but the pH was 5.0, protein 1+ with 4+ glucose and reducing substances. Stool guaiac was negative. Despite careful intravenous management the child's diarrhea continued although it lessened in amount after oral feedings were discontinued. On the ninth hospital day the child's HCT was 27%, sodium 126, potassium 3.1, chloride 102 mEq/L, CO<sub>2</sub> 16.5, mM/L and protein 2.9g%.

Surgical consultation was requested at this point and examination at this time the infant showed slight abdominal distention and somewhat hyperactive bowel sounds. No masses were present. Rectal examination showed the anal sphincter to be quite lax and some blood was present in the stool. It was felt that the differential diagnosis was severe infectious colitis or colitis caused by low segment Hirschsprung's disease. Two prior attempts had been made to determine sweat chloride levels, but these were both unsuccessful due to inability to obtain a sufficient specimen. The child was extremely ill, and so a colostomy was performed. Ringer's lactate, blood and antibiotics were administered preoperatively and the child was taken to the operating room.

A Silastic catheter was placed in the right internal jugular vein and brought out a separate incision in anticipation of prolonged total parenteral alimentation. Then, under local anesthesia, a sigmoid colostomy was performed. At the point where the colon was opened, numerous ulcerated areas and several white patches were noted throughout the gastrointestinal tract, suggesting *Candida* infection. Ganglion cells were present at the site of the colostomy, but no rectal biopsy was performed because of the child's serious condition. Mycostatin was begun orally and topically. Over a period of four days the glucose content of intravenous fluids was increased from 10 to 20% and amino acids from 1.4 to 2.8%. After 13 days on total parenteral alimentation, serum proteins had risen from 2.9 to 4.2 g% and weight had increased to 10 pounds 4 ounces, which was a pound more than her admission weight. On the fourteenth post-operative day, oral lactose-free Protagen was begun and she gradually was able to increase her oral intake. It was obvious however that there was still a great deal of mucus production within the colon. On the seventeenth post-operative day, stool pH was 8.0 and no glucose was noted. On the eighteenth post-operative day, total parenteral nutrition was discontinued and the child was able to maintain herself on oral feedings. On the twenty-third post-operative day, or the thirty-second hospital day, the baby was discharged weighing 10 pounds 14 ounces.

At three months of age she weighed 12 pounds and at four months she weighed 14 pounds 12 ounces. At six months of age she was re-admitted to the hospital for a rectal biopsy which did show ganglion cells, indicating that this probably represented a severe colitis secondary to *Candida* infection rather than low segment Hirschsprung's disease.

The child continued to improve and at 8 months of age she was re-admitted to the hospital for colostomy

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closure. However, she was found to have a stenotic area within the sigmoid colon which was felt to be secondary to her previous colitis. Because of this, sigmoidoscopy and dilatation of the stenotic area were performed instead. She was discharged with the plan of continuing dilatation on an out-patient basis until such time as the colostomy can be closed. In the meantime she continues to gain and to thrive.

DR. JAMES A. O'NEILL: We are most fortunate to have Dr. Raymond Amoury, Surgeon-in-Chief, Children's Mercy Hospital, Kansas City, Missouri, with us today. He has had a longtime interest in the problem of enterocolitis in infants and children.

DR. RAYMOND AMOURY: This is an extremely interesting case and it is my feeling that the baby probably had a specific type of enterocolitis, most likely due to *Candida albicans*, and that this later led to the development of a stenotic lesion in the sigmoid colon. I too have been confronted with the problem of differentiating between enterocolitis due to Hirschsprung's disease and infectious colitis due to other causes in the small infant. Usually, the child with Hirschsprung's disease has persistent abdominal distention, and I gather that this child had only mild distention, which was not a prominent feature of her clinical course.

DR. O'NEILL: That is correct.

DR. AMOURY: In low segment Hirschsprung's disease, it may be difficult to substantiate the diagnosis on barium enema. It is even more undependable when a baby has severe colitis, since evacuation time may not be prolonged. Despite what I have just said, the barium enema should usually be done, since it often does provide us with a diagnosis. When possible, I prefer to perform a rectal biopsy prior to doing a colostomy, but when an infant is as sick as this one was I think it is reasonable to proceed with colostomy, since many infants with nonspecific types of colitis will respond to colostomy as well.

At this point it would be well to mention that there is a somewhat more benign way of establishing the diagnosis of Hirschsprung's disease than obtaining a full-thickness rectal biopsy. Shandling and his co-workers in Canada have been using a suction biopsy forceps, obtaining a specimen at the first prominent rectal fold. The biopsy is of mucosa and submucosa and, in the hands of an experienced pediatric pathologist, this appears to be a reliable method of determining whether ganglion cells are present

or not. The classical method of pathologic diagnosis is to assay the presence or absence of ganglion cells between the longitudinal and circular coats of muscularis, but we now know that this is not always necessary if the pathologist is experienced in interpreting more superficial specimens. The advantage of this method is that a child does not need to be anesthetized, and the incidence of complications is essentially nil. The correlation between submucosal and full-thickness rectal biopsies is fairly good. The method is quite tedious, and it may take two or three hours to completely analyze the tissue.

If ganglion cells are noted, this presumes that embryologically this cell population has migrated out of the neural crest into the muscle coats and the submucosa. Hence, if ganglion cells are seen in the submucosa, one may assume that they are present in the muscularis. On the other hand, if no ganglion cells are seen in the submucosa, many pathologists feel that a full-thickness biopsy should be performed.

DR. O'NEILL: We have a suction biopsy forceps designed by Helen Noblett in Australia. Interpretation of the submucosal biopsies is indeed difficult and tedious but it is possible. If our pathologist sees definite ganglion cells he will report them, but he will not report a specimen as showing Hirschsprung's disease if ganglion cells cannot be found. Under these circumstances we feel that we must have a full-thickness biopsy. The latter method is still our main mode of establishing the diagnosis of Hirschsprung's disease.

We are presently initiating the use of anorectal pressure measurements in infants whom we suspect may have Hirschsprung's disease. This is especially valuable in very small infants, whereas rectal biopsy is difficult in small subjects.

DR. AMOURY: I think that this baby was well managed, although it might have been preferable in retrospect to perform the colostomy earlier. I believe that most pediatric surgeons would perform a colostomy under the circumstances described and control the site of the colostomy, as you did, by performing a biopsy to be certain that ganglion cells were present at the site where the colostomy was performed. The main point to remember is that Hirschsprung's enterocolitis is a lethal disorder. Colostomy is extremely helpful and, from the way things usually turn out, it is rarely done unnecessarily



even if the patient has something other than Hirschsprung's disease.

DR. O'NEILL: As you could tell from the presentation, our approach was as it was because we felt that this was probably low segment Hirschsprung's disease, although we later found out it was not. However, we felt quite secure in performing the colostomy, since a large number of infants have now been reported who have responded to colostomy when all other measures failed in the management of nonspecific or infectious types of colitis. Dr. Amoury, would you please contrast this child's condition with other types of enterocolitis seen in infants?

DR. AMOURY: I think this should be discussed from the aspect of which layers of the bowel wall appear to be involved. This baby appeared to have a gastrointestinal lesion which began on the inside of the intestinal tract, that is, the mucosa. There are other types of colitis which appear to have their origin within the muscular wall and extend inward. This is usually more of an adult problem as with vascular occlusion secondary to atherosclerosis. Occasionally stenotic lesions are seen in adults with the latter type of difficulty. Another type of problem which appears to involve the full-thickness of the bowel wall in some instances and only the mucosa in others is necrotizing enterocolitis of the newborn. This entity may well have its origin during periods of low splanchnic flow in especially small infants in the early postnatal period.

Necrotizing enterocolitis is a highly lethal disorder. Infants with this problem may have evidence of pneumatosis coli on abdominal x-ray, and this is probably the one contraindication to barium enema as a diagnostic tool, since perforation is more likely to occur when pneumatosis is present. Occasionally these infants survive, and we are now beginning to see infants who have recovered from necrotizing enterocolitis who appear months later with partial high grade intestinal obstruction due to intestinal stenosis. Dr. Krasna and his group in New York recently reported five infants who developed stenotic lesions of the gastrointestinal tract following recovery from necrotizing enterocolitis. Four of these infants were treated non-surgically and one of the infants had previously been operated on. Most of the stenotic lesions were in the colon although two infants

had lesions in the ileum. Resection of these areas was necessary.

There are other infants who develop diarrhea secondary to a variety of bacterial organisms. On occasion the gastrointestinal flora changes result in alteration of mucosal enzyme systems, and disaccharide intolerance is a direct consequence of this. The clinical manifestations of the latter process are colitis, diarrhea, and an acid stool which contains glucose and reducing substances.

This infant had received antibiotic therapy in multiple courses outside the hospital, and in addition there is the information that the mother had *Candida* infection during the latter stages of her pregnancy. The baby had skin and mucous membrane manifestations of *Candidiasis* as well. This almost certainly led to the severe diarrhea. Also, involvement of the mucosa in the form of ulceration allowed hyphal components to gradually invade the wall of the bowel and perhaps to cause further sloughing of the mucosa. At times in such situations it is possible to see the appearance of secondary bacterial invaders with the production of actual pus. At any rate I think this is almost certainly the best explanation for the formation of the stenotic lesion in this child's sigmoid colon. I hope that continued dilatations will allow you to avoid the necessity of resection.

The matter of why some patients become rapidly colonized with *Candida* and others do not is of great interest. There are several things which can modify the patient's ability to cope with *Candida* overgrowth and this is familiar to all of you. For example, the adult or the child who has immunological competency manipulated for transplantation or other reasons is often susceptible to fungal overgrowth. Individuals who have debilitating diseases and elderly patients with malignancies or children with leukemia often develop systemic *Candida* infections. Another group of patients who have appeared with this difficulty are those who have foreign bodies in their circulatory systems. For example, those patients treated by hyperalimentation with the methods Dr. O'Neill is using and indeed is developing at Vanderbilt are quite susceptible to *Candida* sepsis unless great care is taken. To begin with, these patients are very debilitated, and they usually have been receiving multiple courses of antibiotics, which set the stage for the migration of *Candida* from the



mouth, where they normally reside in probably a third of the population, down the gastrointestinal tract. If one adds to this the problem of colonization of concentrated glucose solutions as used in hyperalimentation, an already susceptible patient may have added difficulties with *Candida* sepsis. Dr. O'Neill, what has been the problem of fungal infection with hyperalimentation at Vanderbilt?

DR. O'NEILL: We have been quite fortunate to have only about 7% of patients on total parenteral alimentation have bouts of sepsis and only a portion of these have been due to *Candida*.

Despite the fact that we are always concerned about the possibility of infection, there is no doubt that total parenteral nutrition was a tremendous help to this child. We placed a central venous catheter in this infant with some concern because at the time we performed this procedure she had very severe cutaneous *Candidiasis*. I suppose we were fortunate in this particular instance although we were also extremely careful. The infant was managed on nothing but intravenous fluids and yet it was several days before colostomy output decreased to a satisfactory level. After about 10 days or so colostomy output had decreased sufficiently so that oral intake could be initiated. As we calculated nitrogen balance, it was positive from the first day of hyperalimentation onward but it increased tremendously at the point colostomy output decreased and oral intake was started. In the same fashion, when we looked at the weight curve and the intake in calories per kilogram of body weight, marked improvements were seen at that point as well. On parenteral nutrition alone the baby was receiving 120 cal/kg which is a fairly normal intake for a baby, but when oral intake was well established with what I call a predigested formula, the baby was receiving in the range of 140 cal/kg.

I think that parenteral nutrition along with colostomy certainly saved this baby's life. Either one alone would probably not have been sufficient. In many instances, however, total parenteral nutrition for a period of four to six weeks is often all that is necessary to allow for recovery of mucosal enzyme systems in infants who have severe non-specific or infectious colitis. We have now seen a large number of infants with such conditions who, when placed on bowel rest with good nutrition over a sufficient period of

time, recover remarkably well.

This case gave us an opportunity not only to discuss various types of colitis in infants but also to mention various approaches to diagnosis and therapy. I think we are all indebted to Dr. Amoury for his fine discussion.

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## from the tennessee department of mental health

### Geriatric Services in Tennessee

The TDMH has long been concerned about the burgeoning problem of our aging population, particularly with those older people who are mentally impaired. There are over 1500 such people receiving long time care in our state psychiatric hospitals and another 500 to 1000 others are seen in a given year at the community mental health centers. Add to this those other patients from 55 to 65 years of age that have many of the impairments of aged people and the hundreds that are served annually in the out-patient departments of the state hospitals, and it becomes clear that a major portion (40%) of the population of the psychiatric hospitals fall in the general categories of mentally impaired old people.

Not all of these people need psychiatric care and many could be returned to their local communities if nursing care and other support services were available to them at home. These would include such services as home health care; homemaker services for help in preparing meals, cleaning their homes, and doing the basic household chores; meals on wheels—day care services where they could be taken to a day care center while others in the household are at work or out of the house for the day; respite services—where the elderly persons in the household could be cared for in a residential center over a weekend or while the family is on vacation; organized recreation activities through Senior Citizen Centers, Golden Age Clubs, and church groups; nursing homes; and many other services that could support and sustain mentally impaired old people in their own communities close to families and friends. Because these kinds of services do not exist for most old people who need them, there is usually no other place to care for them except in the state mental hospitals if they have some form of mental impairment.

The tragedy of this is not that the care for old people in the mental hospitals is so poor, but that they are removed from family attachments, from friends, their churches, and all the things of community life that help people during

their years of infirmity. These vital resources become cut off because families do not have the kinds of help they need to care for their loved ones who are struck down by some form of mental damage.

One day care center in the State has about 20 members attending, not every day, but occasionally, where they get acquainted with others like themselves, and do things together with the help of competent people to lead them in crafts, music, social activities, and whatever interests are expressed by the group. A skilled nurse sees them each day and medical care is available. There are only two such day care centers in the state. Many old people would be welcome to stay in their own homes if more of this kind of service were available.

It is very significant that in the year 1972, under the leadership of Commissioner C. Richard Treadway, M.D., and Assistant Commissioner Harold W. Jordan, M.D., the TDMH decided that the problems of caring for mentally impaired old people needed much greater visibility throughout the State in order that more extensive forms of service at the community level could be generated that would provide more positive alternatives to long term hospitalization. The hospitals have had to admit these people for years, and this will continue if alternatives are not found.

As of July 1, 1972, in the Division of Psychiatric Services, under the direction of Harold W. Jordan, M.D., a section on Geriatric Services was created for the specific purpose of helping the TDMH and the State of Tennessee to:

- 1) develop alternative ways of caring for the mentally impaired old people,
- 2) expand and improve upon rehabilitative services,
- 3) work with other departments of state government, and other public and voluntary agencies concerned with the elderly in developing an orderly, coordinated program of services for those who are mentally impaired,
- 4) serve as an advocate for the mentally impaired old people.

It has been said that the elderly are a minority



(10% of the population) and that if you add such other minority labels as being poor, being black, being a woman, the degree of minority becomes compounded. But when you add the label of mental impairment, there often is little hope for survival as a dignified human being,

having access to the worthwhile and customary things of life. The TDMH hopes to turn this course around for many old people into more fulfilling ways of living out their later years in dignity even with certain mental handicaps.



## from the regional medical programs

### Expanded Role of Area Advisory Groups

Area Advisory Group members will have an expanded role in determining priorities of the Tennessee Mid-South Regional Medical Program, according to Dr. Paul E. Teschan, Director.

According to Dr. Teschan, workshops are now being held in the seven strategically located areas of the Tennessee Mid-South Regional Medical Program by area coordinators in an effort to determine health needs, program priorities and possible solutions to needs in the different areas.

"We hope the RMP Area Coordinators and their Area Advisory Groups will provide closer team support to their communities, their health interests and health activities in the future," said Dr. William Tribble, Acting Director of Operations.

"We are bringing in professional resources for these workshops, like Dr. Percy and Dr. Smith of Peabody, to act as catalysts."

"We hope," he continued, "to have our Area Coordinators work more directly with the Area Advisory Groups and to work on health priorities listed by the groups. We have already held workshops for the Area Coordinators here in Nashville to help them determine what their new role as liaison between the Area Advisory Groups and the Regional Medical Program staff offices here in Nashville will be."

Area Advisory Groups are made up of health providers and health consumers in each area. Membership ranges from 30 to 60, depending on the region involved.

"When priorities are set by the Area Advisory Groups," said Dr. Tribble, "we hope the area coordinators will work with them on their priorities under the umbrella of the Regional

Advisory Group and the staff of the Regional Medical Program here in Nashville."

"Problems in each area will differ," he continued, "and, of course, as solutions are found to some problems, others will arise. For that reason, these workshops will be held on a continuing basis. We hope needs will be updated as priorities change."

"The Regional Medical Program is a consortium of all health interests in this Region," said Dr. Teschan, "who hope to accomplish together those improvements in health care which are beyond the scope of any one participant to accomplish alone."

"Its purpose," he continued, "is to help improve availability and quality of health care at affordable costs to the Region's citizens. Its method is to provide professional and technical assistance in Regional Medical Program grant funds for cooperative endeavors. Its governancy within this Region assures that program activities are directed toward locally-valid and acceptable efforts."

Area physicians who would like to express their views on health needs and possible solutions in their communities are invited to contact their Area Coordinator with details.

The Area Coordinators are: Mr. Paul Zarbock, Knoxville, 974-2224; Mrs. Betty Wilson, Chattanooga, 265-8254; Mr. Sam Matheny, Cookeville, 528-1519; Mr. William Yates, Nashville, 327-9131; Dr. Jules McNerney, Hopkinsville, Kentucky, 502-886-3908.

Two new Area Coordinators have recently been appointed by Dr. Paul Teschan. They are: Mr. Richard Eddy, Johnson City, 928-6616; and Ms. Sue Patterson, Nashville, 327-9131 (temporarily located in Nashville, will be permanently stationed in Columbia).



# self-evaluation quiz

## The Cooper Quiz\*

(Answers found on pages 79, 80, 81, 83, 84)

**Answer true or false unless otherwise indicated**

1. There is a detectable circulating carcinoembryonic antigen (CEA) in patients with colonic cancer. If CEA is undetectable in the serum of preoperative patients, this suggests that the colon lesion is localized and amenable to curative resection.
2. If the CEA test is negative on a definitive resection patient (postoperatively) this ensures that the tumor has been eradicated.
3. Evaluation of epithelial changes in laryngopharyngeal biopsies for carcinoma in situ utilize the same requirements for lesion of the uterine cervix.
4. Candidiasis has been associated with several different endocrinopathies. Which of the following is most frequently associated?  
(a) hypoparathyroidism (b) Addison's disease (c) ovarian insufficiency (d) thyroid abnormalities
5. Airport weapons detectors may be fatal to patients with permanently implanted pacemakers.
6. During the past five years combination chemotherapy has been used with considerable success in patients with Hodgkin's disease. The current trend is now a single agent and radiation given simultaneously.
7. In early pertussis the drug of choice is (ampicillin) (erythromycin).
8. Patients with bleeding diathesis associated with myeloproliferative disorders *all* have defective platelet function.
9. Metastatic choriocarcinoma of the brain, in women, is an incurable lesion.
10. Severe anemia may produce severe metabolic acidosis.
11. The significant relationship between obesity and hypertension is well recognized. The same relationship applies to both renovascular hypertension and essential hypertension.
12. Of the following three statements concerning the treatment of early syphilis, one is wrong. Which one is wrong?  
(a) Penicillin G has less efficacy than it had originally.  
(b) 30 gm. of tetracycline (over a 10 day period) compares favorably with recommended penicillin schedules.  
(c) The base form of erythromycin in a 30 gm. dose (over a 10 day period) is an acceptable alternate for penicillin.
13. The Epstein-Barr virus was first discovered in cell culture from a patient with systemic lupus.

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\*Published monthly by the Dept. of Medical Education, the Cooper Hospital, Camden, N.J., William T. Snagg, M.D., Director.



14. Epstein-Barr virus studies now have produced evidence that this virus is the etiologic factor in connective tissue diseases.
15. In digitalis intoxication the ECG evidence of intoxication may persist after blood levels are back to a therapeutic range.
16. Regardless of the immediate cause of death in status asthmaticus, autopsies show extensive plugging of airways with tenacious mucus, edema of the bronchial walls and infiltration of the bronchial walls by eosinophils.
17. In patients with bronchitis and asthma nebulization of isoproterenol (and other bronchial dilators) will cause a significant fall in  $\text{PaO}_2$  and  $\text{PaCO}_2$ .
18. Many patients with multiple myeloma will have pain due to old vertebral collapse.
19. Radiation therapy to patients who have multiple myeloma and bone pain is not only excellent palliation but may prevent pathologic fracture.
20. If one excludes drug-users, patients on chemotherapy, and in a neonate and omnionitic, drug cultures containing more than one organism are indicative of contamination.
21. Protein excretion rate is not influenced by fluids and diuretics.
22. It is well known that nosocomial infections have a predominance of gram-negative organisms. Intravenous procedures and instrumentation are associated with increased gram-negative infections. The use of antibiotics does not appear to influence this.
23. Of the three methods of treating Graves' disease listed below, which one is most frequently complicated by ophthalmopathy? (a) radioactive iodine (b) antithyroid drugs (c) surgery.
24. Medicine has been setting "safe" levels of exposure for low-level radiation relative to leukemogenesis. It is now pointed out this "safe" level may not indeed be safe for a certain "susceptible" group.
25. Crohn's disease of the colon does not recur in the small bowel after ileocolostomy as does ulcerative colitis.
26. Transient neonatal diabetes is a rare self-limiting disease. It is usually seen in infants who are large for the gestational age.
27. Patients with sickle-cell disease are known to have an increased susceptibility to infection. It is interesting that microplasmal infections may mimic bacterial pneumonia in these patients and that such infections usually respond promptly to erythromycin despite the fact that there is no evidence that in vivo eradication can be accomplished with erythromycin.
28. Cytomegalovirus is transmittable via human milk.
29. The curative dose of radiation therapy is known for localized Hodgkin's disease. When all sites are adequately treated relapses probably occur because of untreated microscopic foci outside of the field of treatment.
30. In this Stanford study of sequential radiotherapy and chemotherapy in the treatment of Hodgkin's disease, the authors are enthusiastic about such a modality.
31. The principal drug for deep seated fungal infections currently is (a) Amphotericin B (b) Ampicillin (c) Genomycin.
32. Compared to amphotericin B, 5-fluorocytosine is (a) more toxic (b) less toxic.

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# TMA

## EKG of the month

A 36 year old, unemployed musician was referred for evaluation of recurrent chest pain of two years duration. The chest pains were of brief duration and were unrelated to exercise. Two weeks prior to admission he was hospitalized elsewhere with a diagnosis of "probable myocardial infarction." At that time he described the onset of a severe, "tight" sensation in his anterior chest which radiated into both arms, occurring after eating a large dinner. This was associated with mild dyspnea and diaphoresis and persisted for approximately one-half hour. There was no elevation in level of serum LDH, CPK or SGOT. At the time of admission to St. Thomas Hospital, physical examination revealed a mesomorphic, healthy appearing, white man in no distress. Examination of the cardiovascular system disclosed no abnormalities. The patient was hospitalized for further observation. Serial SGOT, LDH and CPK determinations were within normal limits. The following electrocardiogram was obtained (Fig. 1).

II, III and AVF. This pattern might be misconstrued to represent an inferior myocardial infarction. However, closer scrutiny of the electrocardiogram reveals the PR interval to be 0.10 seconds. A delta wave is apparent in leads I, AVL and the precordial leads. The correct diagnosis is pre-excitation (Wolff-Parkinson-White)<sup>1</sup> syndrome and the marked superior orientation of the initial forces (simulating an inferior infarction with q wave in leads II, III and AVF) is due to this delta wave. The diagnosis of an inferior wall infarction cannot be made in this setting.

In 1953 Drs. Wolff and Richmond called attention to difficulty in diagnosis of infarction in the presence of pre-excitation.<sup>2</sup> The anomalous early forces in this syndrome may at times simulate infarction and conversely electrocardiographic evidence of myocardial infarction during normal conduction may be masked by the development of the anomalous conduction. In order to avoid error, therefore, conversion to

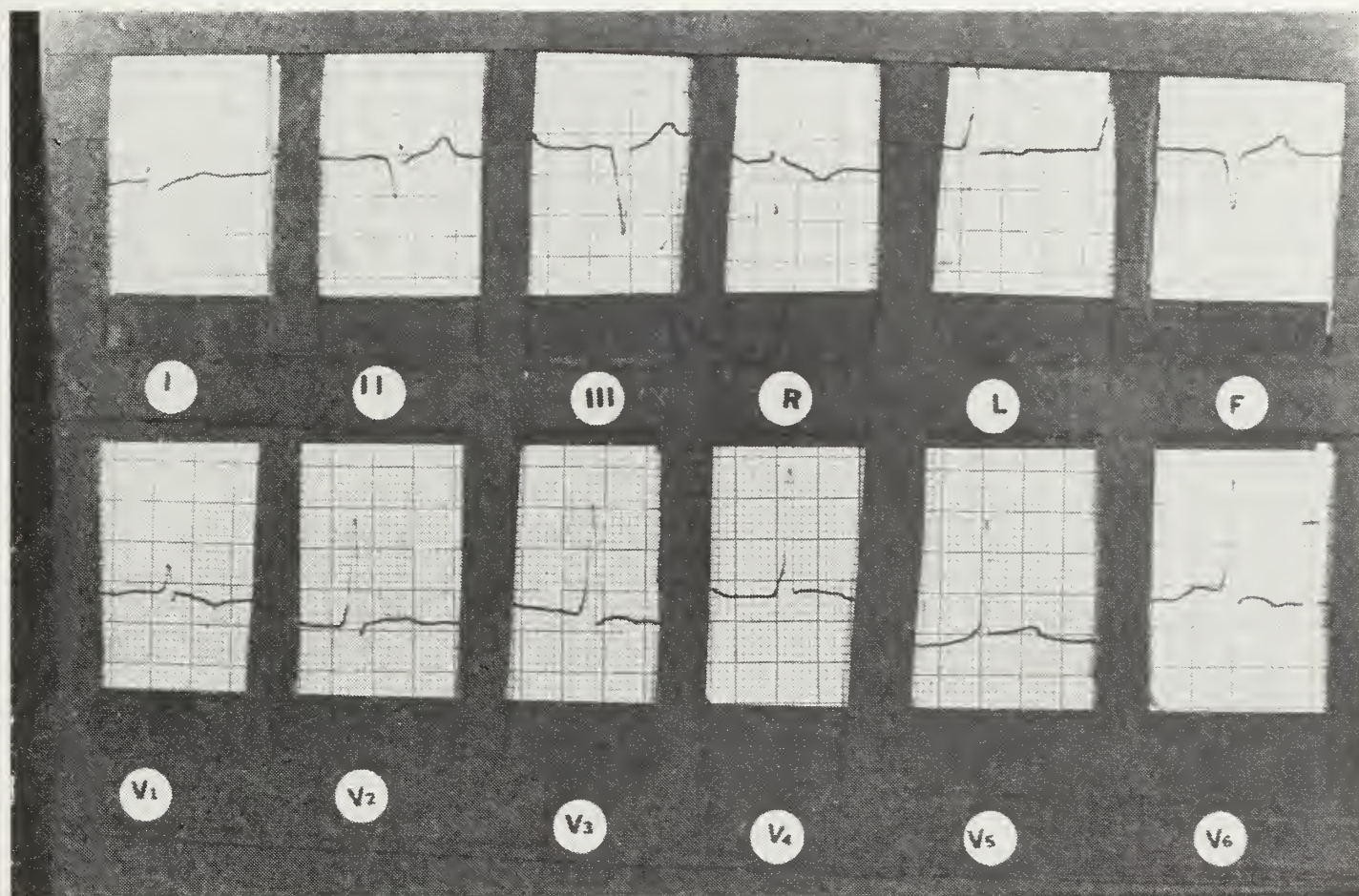


Fig. 1

This admission electrocardiogram shows early QRS forces that are very superiorly oriented, causing a q wave to appear in standard leads

From: St. Thomas Hospital, Department of Cardiology, Nashville, Tenn.

normal conduction is desirable. This may occur spontaneously or may be induced by maneuvers which alter conductivity across the AV node. The use of Valsalva maneuver, carotid sinus massage, amyl nitrite, atropine, quinidine or



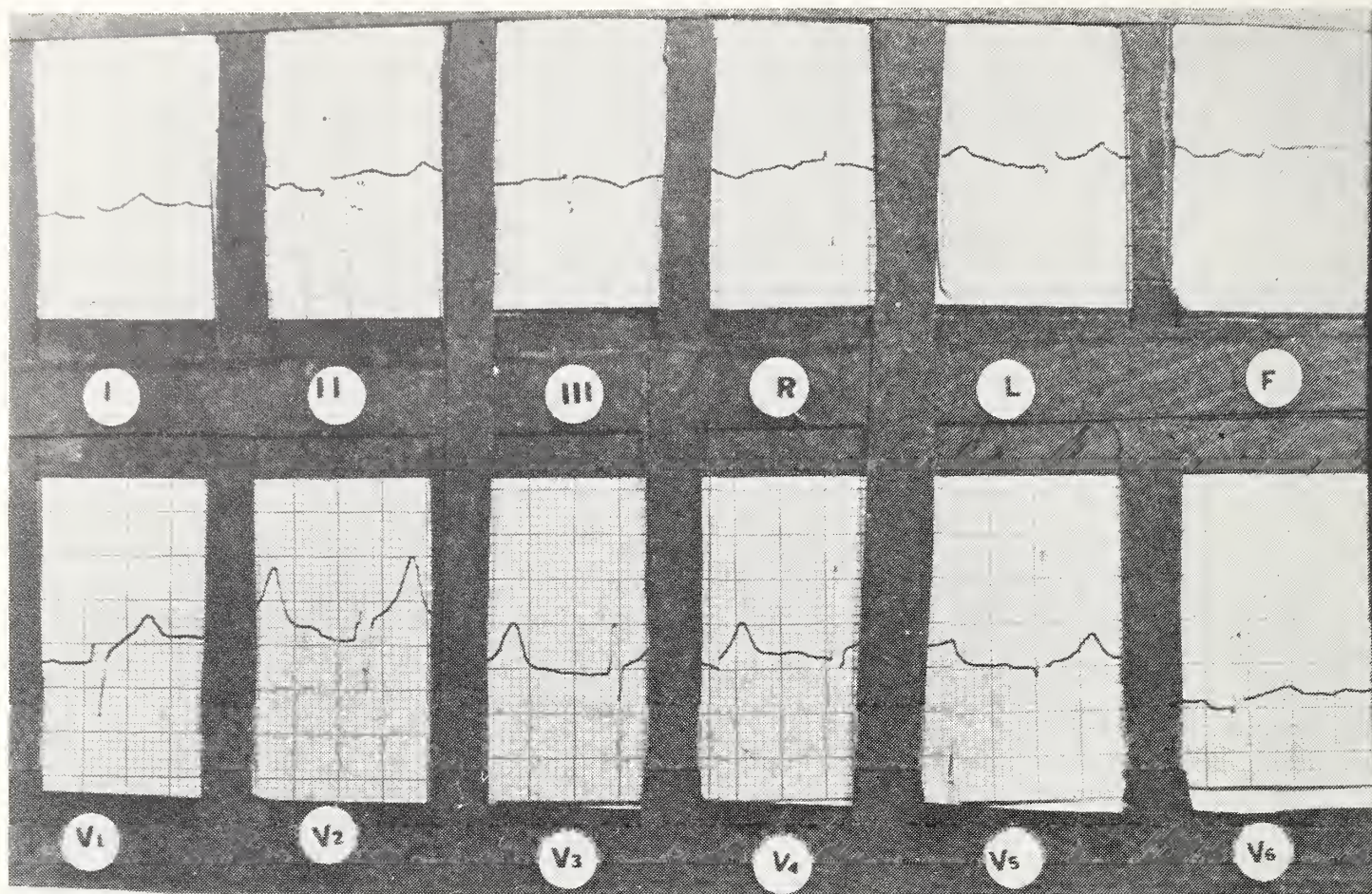


Fig. 2

procaine amide have been tried with varying degrees of success.

A subsequent EKG (Fig. 2) obtained during normal conduction, shows disappearance of the delta wave and initial superior oriented forces thus excluding the diagnosis of inferior infarction.

When the diagnosis of pre-excitation syndrome is uncertain from the standard 12 lead electrocardiogram, vectorcardiography may be of value. The vectorcardiogram (Fig. 3\*) characteristically shows marked slowing of the initial portion of the QRS complex, representing the delta wave. This slowing is quite evident in Fig. 3\* in which bunching of the dots can be seen clearly in the initial portion of the loop. (The vector loop dots move "head" first.)

Pre-excitation syndrome is categorized into those cases which appear to have the anomalous conduction pathway originating in the left ventricle (type A) and those which appear to have the anomalous conduction originating in the right ventricle (type B). (Those in which the origin of the forces are indeterminate have been called type C.) The initial forces in this electrocardiogram are noted to be oriented leftward, anteriorly and superiorly. The anterior orientation suggests that the origin of the anomalous

conduction is in the left ventricle (type A). Superior orientation of delta forces has been noted to occur in approximately 30% of pre-excitation tracings.

With the patient conducting normally, a treadmill exercise electrocardiogram was carried out and the patient reached a heart rate of 174/min (94% of his predicted maximal rate for age). There was no chest discomfort during the test and there was no ST segment depression during or following exercise. Left heart catheterization and coronary cineangiography disclosed no abnormalities. Although the patient had no tachycardia during the course of his hospitalization, it is very probable that the episodes of dyspnea and chest discomfort that he described are related to the paroxysmal atrial tachycardia which so frequently accompanies this disorder.<sup>1</sup>

Harry L. Page, Jr., M.D.

W. Barton Campbell, M.D.

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\*Fig. 3 appears on page 27.



from the  
executive  
director

J. E. BALLENTINE

# MEDICAL DIGEST

NEWS OF INTEREST TO DOCTORS IN TENNESSEE

## H.R. 1—SOCIAL SECURITY AMENDMENTS 1972—NOW LAW

H.R. 1, with some 100 changes in Medicare, Medicaid, maternal and child health is now law. The bill provides establishing PSRO's (Professional Standards Review Organizations), to police costs and quality of health care for Medicare, and Medicaid patients. Following is a brief resume analysis of major amendments. It's important.--Read it.

Professional Standards Review Organizations (PSRO) . . . representing a substantial proportion of practicing physicians, would assume responsibility in local areas, designated by the Secretary of HEW by January 1, 1974, for comprehensive and ongoing review of services covered under Medicare and Medicaid. Review would be made to determine whether services provided were medically necessary, met appropriate professional standards, and in the case of proposed inpatient services, could be provided on an outpatient basis or more economically in a facility of a different type. Only organizations representing a substantial proportion of physicians would be allowed to establish PSRO's until 1976. After 1975 the Secretary could contract with other groups for the performance of this review function, but he could enter such contracts only after finding that local professional groups were unable or unwilling to perform the review function. PSRO's would initially be limited to the review of health care provided by or in institutions, and could assume review of other services only with the approval of the Secretary.

Utilization Review Requirements . . . Requirement that hospitals and ECF's participating in Medicaid or Title V programs must have those patient cases reviewed by the same utilization review committee as is already reviewing their Medicare cases, (or, if one does not exist, by a review group which meets Medicare standards). This requirement may be waived, however, where an alternate system has been approved by the Secretary.

Chiropractor Services Under Medicare . . . Includes as a "physician" a chiropractor who is licensed as a chiropractor in his state and meets federal standards, but is included only for covered services limited to treatment by manual manipulation of the spine "to correct a subluxation demonstrated by X-ray to exist."

Prosthetic Lenses . . . The definition of "physician" under



Medicare would be modified so as to include optometrist, but only with respect to establishing the need for prosthetic lenses.

Disability benefits for disabled persons receiving cash benefits under SSA or Railroad Retirement. Includes disabled workers, disabled widows and widowers ages 50 to 65; disabled persons 18 or older receiving SS benefits for disabilities occurring before age 22.

Part B Medicare raised to \$5.80 monthly, with subsequent increases to be related to actuarial rating, and part B deductible goes from \$50 to \$60. Automatic enrollment in part B upon part A eligibility unless non-participation is elected.

Medicaid matching funds to states would be reduced in some services if HEW determines a lack of "proper utilization and medical review methods."

HEW will be required to develop experiments, demonstration projects to test methods of making prospective payments, in addition to experiments in reimbursement to ambulatory surgical center, elimination of three-day hospital requirement for extended care benefits, use of institutional, home-maker services as alternatives to post-hospital services, provision of day care services, develop method to pay physician's assistant, and determine if clinical psychologist's services should be made more available.

Medicare costs would be limited through authority given HEW secretary to set prospective costs as "reasonable" for certain classes of providers of services.

Limits on Prevailing Charge Levels . . . Limitations on reasonable charges, so as not to exceed the higher of the prevailing charge on December 31, 1970, or to the prevailing charge level that, as determined by the Secretary, would cover 75% of the customary charges made for similar services in the same locality in the base year preceding. In the case of physician services, limitations are placed on future increases, based on economic changes. Payments under the Medicaid and Child Health Programs could not exceed the limits established under the Medicare program for similar services. Where medical services, supplies, and equipment do not vary significantly between suppliers, the charges could not exceed the lowest charge levels in the area . . . HIBAC to study methods of reimbursement for physicians under Medicare to evaluate effects on physicians' fees generally the extent of assignments accepted by physicians, and the share of total physician-fee costs which the beneficiary must assume. The Council is to make alternative recommendations to present methods and state a preferred method.

Skilled Nursing Home and Intermediate Care Facility Payments . . . Limitation on the average per diem cost for skilled nursing homes and intermediate care facilities countable for federal financial participation under Medicaid in any quarter to 105% of such costs for the fourth quarter of the preceding year, with allowable increases for added patient services.

Payments to Health Maintenance Organizations . . . Authorization for



reimbursement, through a single capitation payment, to qualified HMO's making available directly or under other arrangements, such Part A and B services as would otherwise be available in the area. A qualified organization will have at least 25,000 members, of which not more than half are 65 or older, and will have been in operation at least two years (or, in a small or sparsely settled community, will have at least 5,000 members and be in operation at least three years). As incentives, the organization will be entitled to half of the savings represented by the difference between its costs and average per capita costs in the area for beneficiaries not enrolled in the organization, limited, however, to 10% of such average per capita costs. (Federal government would not share in losses.) The Secretary is directed to report annually to Congress on its experience with this provision.

Teaching Physicians . . . Reimbursement for services of teaching physicians to a nonprivate Medicare patient to be made under Part A on an actual cost or "equivalent cost" basis. Exceptions under which fee-for-service may continue, would include payments for Medicare beneficiaries who are bona fide "private patients," and beneficiaries in institutions which meet certain charging practices since 1965.

Advance Approval of Extended Care and Home Health Coverage . . . Authorization to the Secretary of HEW to establish, by medical conditions and length of stay or number of benefits, periods for which a patient would be presumed to be eligible for extended care or home health care benefits and services.

Termination of Payments . . . Authorization in the Secretary to terminate Medicare, Medicaid, and Maternal and Child Health payments to providers of health or medical services found guilty of fraudulent representation, excessive charges or furnishing services in excess of need or of grossly inferior quality. The Secretary would create program review teams, in each state, composed of physicians, other professional personnel, and consumer representatives.

Reasonable Cost of Inpatient Hospital Services . . . Authorization under Medicaid and Title V to the States to determine reasonable cost of inpatient hospital services in accordance with methods and standards developed by the State, but not to exceed reasonable costs under Medicare.

Payments Where Reasonable Cost Exceeds Customary Charges . . . Reimbursement for services by providers under Medicare, Medicaid, and Maternal and Child Health programs limited to the lesser of the reasonable cost of such services under Medicare, or the customary charges to the general public for such services, with special provisions applicable to a public provider furnishing services free or at nominal cost.

Prohibition Against Reassignment . . . Reassignment of claims would be prohibited, thus limiting payment under Medicare and Medicaid generally to the patient, his physician, or other person providing the service, unless the physician or other person is required as a condition



of employment to turn his fees over to his employer or unless he has an arrangement with the facility in which the services were provided under which the facility bills for the services. (Direct payment could also be made to a foundation, association, plan, or contractor which provides and administers health care through an organized health care delivery system.)

Unnecessary Admission . . . Authority to the utilization committee to notify the physician, patient, and hospital that payment for services by Medicare will cease in three days in not only those cases where the Committee finds that hospital or extended care stay is no longer necessary, but also in cases where admission was not necessary.

State Health Agency Functions . . . Requirement that the state health agency (or other appropriate state medical agency) be the certifying agency within the state for health facilities for participation in the Medicare, Medicaid, and the Maternal and Child Health programs . . . Also required are state plans for the review of the appropriateness and quality of health care furnished under Title XIX and Title V.

Medicaid and Comprehensive Health Care . . . Permission to States to waive federal statewideness and comparability requirements if a state contracts with an organization which has agreed to provide health care and services in addition to those offered under the state plan to eligible people who reside in the geographic area served by such an organization and who elect to obtain such care and services from the organization. Payments could not be higher on a per capita basis than per capita payments for other Medicaid recipients in the same general geographic area who are not under the proposed arrangement.

Laboratory Billing of Patients . . . Authorization to Secretary to negotiate a payment rate acceptable to laboratories for diagnostic tests, which payment will be considered as full charge for such tests.

Recovery of Incorrect Payments . . . Presumption that any overpayment discovered after the expiration of three years will have been made without fault on the part of the provider and that no collection should be made . . . Additionally, the Secretary would be authorized to deny claims for reimbursement made after the lapse of a reasonable period of time of not less than one nor more than three years . . . Requirement that providers (or physicians or others where they have accepted assignments) where collection of an overpayment is made from the provider or others, be prohibited, after three years, from charging beneficiaries for services found to be medically unnecessary or custodial in nature, in the absence of fault on the part of the beneficiary.

Treatment in Mental Hospitals for Individuals under Age 21 . . . Authorization of federal matching under Medicaid for eligible children under age 21 receiving in-patient care and treatment for mental diseases.



# Notice To All Members!

- ★ Your Memberships in the Tennessee Medical Association and American Medical Association, including subscriptions to *The Journal of the Tennessee Medical Association* and *The Journal of the AMA* expired on December 31. Here's how to renew them:
- ★ Mail your dues immediately to the SECRETARY of YOUR COUNTY MEDICAL SOCIETY.
- ★ TMA dues are \$80.00. AMA membership dues are \$110.00. If you don't know the amount of your County Medical Society dues, check with your local Secretary.
- ★ Many members probably will want to send one check to cover local, state, and national dues. **Make Check Payable To Your County Medical Society.**
- ★ Your local Secretary or Treasurer will forward state and national dues for you and other members to the Nashville Office of the TMA. That office will transmit AMA dues to Chicago.
- ★ Remember: As a part of the privileges and services offered to all members of TMA, you will receive a year's subscription to *The Journal of the Tennessee Medical Association* without cost. Dues-paying members of the AMA will receive a year's subscription to *The Journal of the AMA*, *Today's Health*, and *American Medical News*.
- ★ The member who becomes eligible for exemption from dues, and wishes to take advantage of exemption, should make his wishes known to the Secretary of his County Medical Society. After exemption has once been established, the member is carried over from year to year, unless the status changes and notification is received from your County Medical Society.

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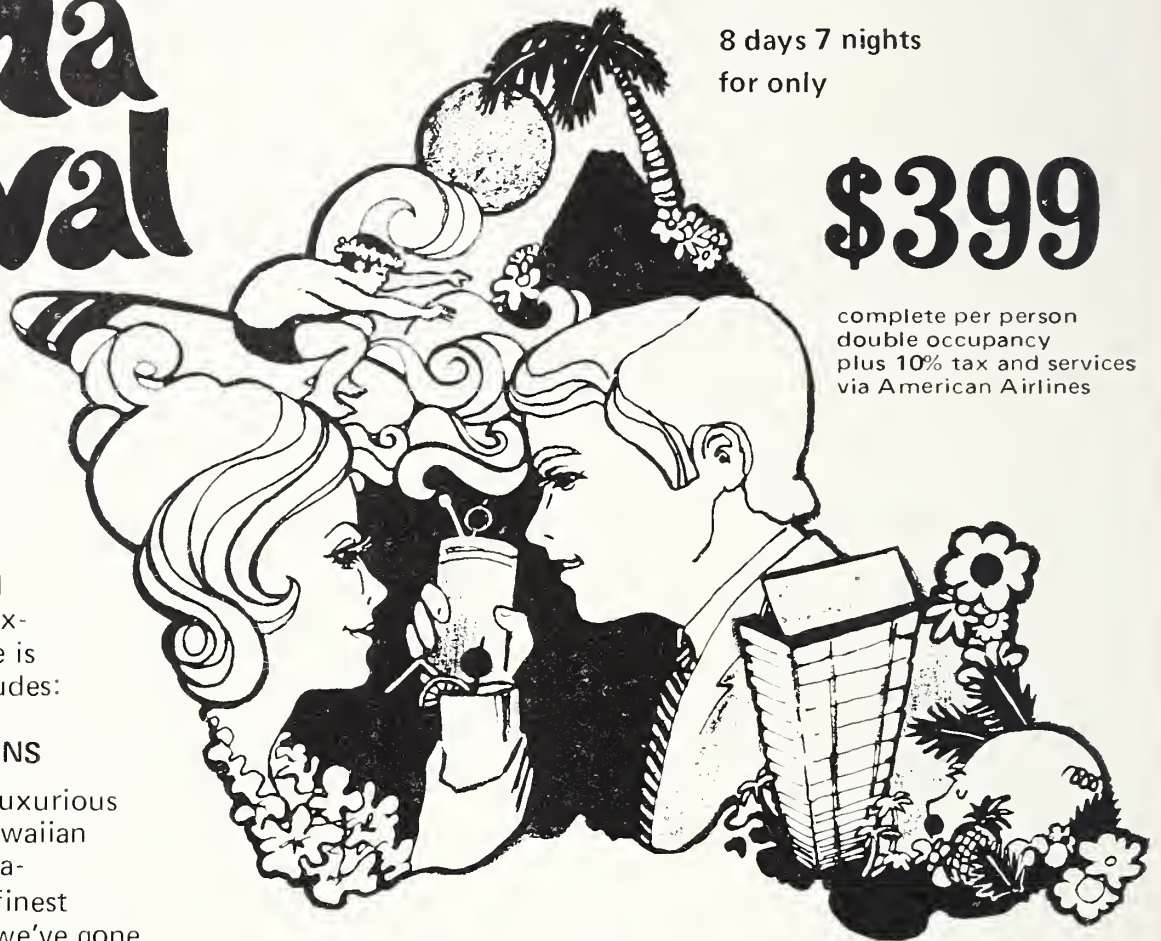
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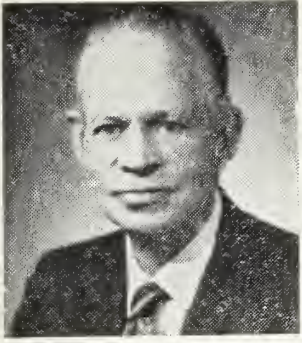
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WM. T. SATTERFIELD

**president's  
page**

## *Closing in on Private Practice*

The steps that lead to complete regimentation of physicians in the private practice of medicine have been taken so rapidly that we are being lulled into a depressed, non-resistive attitude. Could it be that we have adopted a defeatism that says to us—"this had to come; now it has come and it's the law of the land and we have to make the best of it by grabbing the few crumbs of planning that are offered us."

Medicare revision from "usual and customary" to the 75th percentile of *several years ago*, Phase II with its discrimination against private practicing physicians *only*, and PSRO have come upon us in accelerating rapidity. The completion of domination will be in a national health plan which seems to be universally accepted as arriving in the next two years.

We objected to Medicare and made some fight against it, warning of its prohibitive cost. We indicated our discontent with Phase II, with no result. The government has limited private practice physicians to fee increases of 2.5 per cent a year—while institutions which employ salaried physicians may increase charges up to 6 per cent annually. This applies only to our profession—no other. Small businesses are now witnessing a removal of price control restrictions. The regulations actually discriminate against physicians in private practice. And, Phase II probably will be extended in April. We compete with institutions and hospitals for services of nurses, technicians, secretaries and clerks, yet regulations do not permit us to raise prices and pass on increased costs as institutions can. Rents, costs of pharmaceuticals, of auditing fees, of legal services and malpractice protection costs may be increased more than our allowed 2.5 per cent. Do the fees of physicians actually have that much impact on the economy and is this really curbing the rate of inflation? Our fees are actually 1.4 per cent of the Gross National Product.

PSRO (becoming law as the Bennett Amendment of (1972) H.R. 1) is regulation of "peer review" for physicians. We have had peer review for many years—to maintain quality of physician care. Legalized peer review is primarily to cut down the cost of care, although it has been demonstrated that the cost of public medical care has gone up (in the past 15 years) 293%, while private care costs have increased 123%.

Control of private practice, through the utilization of a proven military principle—"divide and conquer"—is progressing rapidly. The blueprint for obtaining control has been adhered to. We must accept the law of the land as it becomes so. We should endeavor to apply the law to the best interest of caring for our patient, which, after all, is what our medical practice is all about.

If there is defeatism in the attitude of private physicians, the only way it can be dispelled is by *unity of purpose* in preserving the high level of medical care by dedicated physicians.

Sincerely,

*William T. Satterfield*

President

# journal

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JANUARY, 1973

# editorials

## Janus—1973

### *Steps to Destruction*

1. *The undermining of the dignity and sanctity of the home, which is the basis of human society.*
2. *Higher and higher taxes; the spending of public money for free bread and circuses for the public.*
3. *The mad craze for pleasure; sports becoming every year more exciting, more brutal, more immoral.*
4. *The building of great armaments when the real enemy is within—the decay of individual responsibility.*
5. *The decay of religion; faith fading into mere form, losing touch with life, losing power to guide the people.*

*The average age of the world's great civilizations has been 200 years. Nations progress through the following sequence:*

*From bondage to spiritual faith; from spiritual faith to great courage; from courage to liberty; from liberty to abundance; from abundance to selfishness; from selfishness to complacency; from complacency to apathy; from apathy to dependence; from dependence to bondage.*

*Gibbon: Decline and Fall of the Roman Empire*

January is named for Janus, who had two faces, so that he could look both fore and aft at the same time. It is appropriate, then, in January to look to the future in the light of the past, perhaps to learn from previous mistakes.

Although an editorial may serve as a source of information, its primary purpose is to provoke and stimulate. It represents the writer's reaction to a given set of facts, and a successful editorial should not only stimulate the reader to agree or disagree, but to start out on his own course of thought. Such being the case, the above quotation from Gibbon is an editorial complete in itself. There are some aspects of it, though, which apply to us as physicians in a special way, and I should like us to look at them item by item, remembering that in 1976 the United States will be 200 years old.

*The undermining of the dignity and sanctity of the home, which is the basis of human society.* According to recently published articles, it is almost within our power to produce a breed of parentless children, to the apparent delight of many women's libbers. It is now theoretically possible, and apparently in the mill of accomplishing, to build a satisfactory artificial womb, artificially fertilize in it a selected ovum with a selected spermatozoon, and produce a human child of pre-selected genetic characteristics, sending him into the arms of a waiting surrogate mother, formed possibly of warm terry cloth. The sociologists or what have you would then be free to program him in any way they wished. He would be a ward of the state. We would keep our population at the desired level, and the liberated women would be freed of the joys of motherhood—and the child would be unfettered, free of parental pressures (and love).

The implications of this are too devastating to consider, yet we must consider them. If we say it can't happen here, we will be inviting it, because it will be technically within our power; the home would finally be relegated to oblivion.

*Higher and higher taxes; the spending of public money for free bread and circuses for the public.* Everything free for the public! Free bread for those who will not work as well as for those who cannot. Free health care; cradle to the grave security. These have been the promises to our people from each administration from the New Deal to the Great Society. For 40 years now we have been led by our dema-



gogues to expect their fulfillment and the natives are getting restless.

We physicians must bear our share of the responsibility for this. We as a profession and often as individuals are beginning to suffer from this over-emphasis on rights. When we entered medicine we did so affirming that the needs of our patients came first. We need to continue to remind ourselves of that. While the Federal government continues to affirm its belief in the rights and dignity of the individual, the bureaucratic system is such that the opposite often results.

There are literally millions in our country who are desperately poor, for whom medical care is not even an unfulfilled dream. Many who can afford it have only limited access to it. Though the solution is complicated and elusive, many innovative methods have been proposed in answer to these problems. Too often we as doctors have opposed them, on economic grounds thinly disguised as ethics, and have taken little initiative of our own. We should be the leaders in seeing that all people get adequate medical care. We have listened to and have allowed ourselves to be turned off by demagogues demanding "the best" medical care for everyone. We have seen this to be logistically impossible and productive only of mediocrity, and so we have too often become defensive, forgetting that, in spite of disclaimers to the contrary, millions would settle for *any* medical care, even from physicians' assistants, nurse clinicians, and midwives. And so we allow (or possibly force) the Federal government to go its merry, inefficient, uneconomical, bureaucratic way, and we complain about infringement on our rights, and our high taxes.

*The mad craze for pleasure; sports becoming every year more exciting, more brutal, more immoral.*

SOMEWHERE IN SOUTH CAROLINA—With the strength and symmetry of a discus thrower, the burly red-faced man whirls his body twice around and, grunting loudly, hurls the object clenched in his right hand high into the sky.

Which is a little odd, since the object clenched in his right hand is—a pigeon. A live, squawking pigeon minus a few tail and wing feathers, which the burly red-faced man has rudely plucked out.

For the pigeon, that's just the start of hard times. For, once he loses his tail and gets flung into the air, someone starts shooting at him with a .12-gauge shotgun. If he gets shot and plummets to the ground, ladies applaud and men cheer and pay off their \$50

bets. The pigeon may be dead or wounded. Either way, he is left on the ground until the shooting of other pigeons is done with. Then, either way, he is stuffed in a large garbage can and carted off to the city dump.

This is called a sport. Throughout the South and the Southwest it is a very popular one, especially with wealthy people who gamble lots of money on whether the tail-less pigeons hurtling through the air will get blown apart. It is called a "pigeon shoot," and it can be an elaborate affair that runs for a couple of days.

"A lot of people just don't understand," complains the promoter here, dressed to kill, as it were, in a buckskin coat, fancy Indian hat with feather, and alligator boots. "A lot of do-gooders think this is cruel, but it's really a heck of a sport."<sup>1</sup>

*The building of great armaments when the real enemy is within—the decay of individual responsibility.* The reference here is obviously to national armaments, but the dependence on force is an individual matter and depends upon the inner resources of the individual. We are quite simply reaping the benefits of our previous callousness. Fear and resentment build on fear and resentment, and ultimately lead to violence and revolution. The human spirit will simply not remain in bondage. Its manner of reacting will depend upon its spiritual values. This is an individual matter, and depends upon individual responsibility. Responsibility is learned, and only from example. If those in authority and in positions of responsibility do not act responsibly, the result is chaos. The answer is not in walls and locks or force of arms. The young tend to act as they see their elders act, but tend often to over-react. If their elders react in prejudice, fear, and hate, that which was controlled in their elders becomes in the young active rebellion and violence, and the pattern of life is established. It behooves us as physicians, as responsible members of the community, to be sure of the example we are setting, not yielding to the temptation to cut corners because "everyone else is doing it."

*The decay of religion; faith fading into mere form, losing touch with life, losing power to guide the people.* The answer to this, and to all of the above, lies here. It was stated over 2,500 years ago: "A new heart also I will give you, and a new spirit I will put within you: and I will take away the stony heart out of your flesh, and I will give you an heart of flesh. And I will put my spirit within you, and cause you to walk in my statutes, and ye shall keep my judgments to do them." (Ezekiel 36:26-27)



The existential philosophy, that there are no absolutes, but that each situation must be considered in its own light, has led to erosion of morals. A sober, thoughtful look at the Ten Commandments, and then at our world, should convince us of their abiding validity. Man sins against God by putting all sorts of gods before Him—money, power, things, some of them his neighbor's, often his neighbor's wife. His sins against his neighbor result in wars, collective and private. This has led to a divorce rate in this country of 445 per 1000 marriages, and a venereal disease epidemic which has become a plague which attacks rich and poor alike, as rampant in the suburbs as in the ghettos. One of our colleagues said on the floor of the AMA House of Delegates, "It's about time we learned that the Ten Commandments are good health laws."

In this issue of the JOURNAL the lead article is entitled "Medicine Without an Ethic" It touches on some issues which because of the tremendous technical sophistication we have developed loom large in medical practice today. The tragedy for medicine is that it like the rest of the world is in danger of seeing its spiritual values replaced by materialistic determinism. This bodes ill not only for the patient, but for our profession.

Our forefathers left their homes because of bondage of one sort or another to come to a new, unknown world. Though there is a tendency today in our ultra sophistication to point out that many of the early colonists came to escape prison, we need to bear in mind that the prisons contained not only criminals, but overflowed with debtors and political prisoners. More important, the leaders were, almost to a man, men of vision grounded in spiritual faith. From this faith stemmed the courage on which our liberty is based.

We have come a long way in our 200 years as a nation—from bondage to spiritual faith; from spiritual faith to great courage; from courage to liberty; from liberty to abundance. Are we now on the downside? Or would it be more appropriately asked, how far on the downside are we? Have we gone from abundance to selfishness, to complacency, to apathy?

Be reminded that trivial misbehavior or lack of consideration often can lead to results with important philosophical implications. Thus, respect given to a physician must be earned; it is not self-perpetuating. Loss of respect leads to lack of patient confidence, dis-

satisfaction and exaggerated criticism expressed in unwillingness to vote against socialization of medicine. On a grimmer note, I recall the lack of respect for the dead body in the early days of the Nazi ascendancy. It is not too far from this to the crematory ovens of Auschwitz with physician cooperation.

Unless some lead the fight to maintain individual responsibility and convince the voters that this is to their ultimate advantage, the voters will continue to listen and agree with the vocal, violent and articulate minority who would lead them into a police state conveniently labeled "utopian democracy," too often enforced by the slaughter of millions. Have we so soon forgotten the history of perfidy of the Hitlers, Stalins, and Maos?

Physicians must learn the price of short-term gains in terms of long-term prices. The only way to do this is never to lose sight of the underlying philosophy, abstract and often remote as it may seem. Others cannot do this for us. We would court even further disaster were we to surrender decision-making to a federal government already so overburdened that decisions on the military, foreign policy, currency and welfare, to mention but a few problems, leave so much to be desired.<sup>2</sup>

Next in line to dependence comes full circle, bondage. There are encouraging signs on the horizon, but we must be sure that the medical profession generally and physicians individually bend every effort not only to prevent further erosion, but to provide wise and responsible leadership for further progress.

J.B.T.

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### Volunteer Physicians for Viet Nam

Military activity for almost a generation has left behind in South Viet Nam a mass of suffering humanity, from a war in which there have been incredible numbers of civilian casualties, both directly from military action and from its side effect.

In the summer of 1965 "Project Viet Nam" was initiated under the direction of the People to People Foundation. The following year the project was redesignated the "AMA Volunteer Physicians for Viet Nam Program," funded through the State Department. The request to AMA was to maintain 32 volunteer physicians of specified specialties in Viet Nam at all times. This was reduced in 1971 to 24, and was further reduced to 14 in 1972.

During the seven years the program has operated, more than 750 U.S. physicians have served more than 950 tours of 60 days each



in provincial hospitals in South Viet Nam, among them 8 from Tennessee: Drs. Joe Bryant, Lebanon; Richard France, Nashville; Brett Gutsche, Memphis; Nat Hyder, Jr., Erwin; Curtis McGowan, Clarksville; Walter Pyle, Franklin; Paul Spray, Oak Ridge; John Wolaver, Knoxville.

In 1973, emphasis will be placed on the teaching-preceptorship role of the volunteer physicians. While there will be a continuous need for a pure service role, it is planned that Volunteer Physicians for Viet Nam (VPVN) will be utilized primarily to establish a "Continuing Medical Education" program in Viet Nam.

To maintain the program at its current level throughout 1973, it would now appear that the AMA must recruit at least 24 VPVN in Medicine (Family Practitioners, Internists and Pediatricians) a minimum of 24 General Surgeons, and 12 Orthopedic Surgeons. There is also a need for 36 VPVN in the other specialties to include Anesthesiologists, Ophthalmologists, Otolaryngologists, Psychiatrists, Radiologists and specialists in Physical and Preventive Medicine.

Why not give some thought to joining your colleagues in an errand of mercy to the unfortunate sick and injured population of South Viet Nam?

J.B.T.

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## U. S. Drug Crisis

Occasionally there is a book of such import that it requires a wider exposure than is afforded by the Book Review Column. Stephen L. de Felice, M.D., President of Clinical Resources, Inc., a subsidiary of MEDCOM, Inc., has written a book called *Drug Discovery: The Impending Crisis*. His views are summarized as a special item in this issue, which is an address which he has delivered before various professional groups.

Dr. de Felice is well qualified to write this book, having been trained in general medicine, endocrinology and clinical pharmacology. He

was Chief of the Section of Clinical Pharmacology at Walter Reed Army Institute of Research, following which he rose through various assignments to the position of Medical Director of Phizer Laboratories, which he held for two years prior to accepting his present position.

Dr. de Felice's report simply emphasizes what has been pointed out on numerous occasions in these columns: we seek total protection by government agencies at our peril. Over-regulation stultifies, and kills initiative, but worse still, in this instance, it makes new drug development impossible. To be freed of all risk, in any area, is to be imprisoned. We in this country are in danger of locking ourselves in a prison of our own design and manufacture.

J.B.T.

de Felice, SL, *Drug Discovery: The Impending Crisis*. Medcom Press, 2 Hammarckjold Plaza, New York 10017, 1972. \$9.95.



JONES, ULYSSES G., Johnson City, died November 11. Age 88. Graduate of Lincoln Memorial University, 1914. Member of Washington-Carter-Unicoi County Medical Association.

THOMAS, A. LEE, Memphis, died November 29, Age 48. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.



The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Allen David Lewis, M.D., Chattanooga  
Pete S. Soteres, M.D., Chattanooga

### CONSOLIDATED MEDICAL ASSEMBLY

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John M. Gregory, M.D., Memphis  
John C. Morrison, M.D., Memphis

### SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

James A. Pettigrew, M.D., Bristol

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

Congressional leaders have given national health insurance a high priority, but the new Congress convening this month may not act on it until late this year or even next year.

Senate Democratic Leader Mike Mansfield of Montana assigned the legislation "the highest priority" and expressed confidence that a national health insurance program will be approved during the next two years by the 93rd Congress.

The key congressman on this legislation, Rep. Wilbur D. Mills (D., Ark.), chairman of the House Ways and Means Committee, has described the 93rd Congress as moving "to fashion a national health insurance program which the great bulk of Americans can support."

The three major national health insurance bills before the Congress will be the Nixon Administration's proposal financed by employer-employee contributions, the American Medical Association's Medigap plan and legislation sponsored by Sen. Edward M. Kennedy (D.-Mass.).

The Ways and Means Committee acts first on such legislation and it had been expected to take up tax reform and possibly pension plan legislation before national health insurance. This would have deferred national health insurance for at least several months. But the time-table has not been definitely set and Mills recently indicated that tax reform might be given a lower priority.

Another piece of legislation of major importance to the medical profession that will be before the 93rd Congress deals with Health Maintenance Organizations (HMO's). The Senate last year approved a bill authorizing a broad HMO program and the House Health Subcommittee approved a much more limited program.

Democrats remain in control of Congress and the key congressmen on health care legislation will continue to be Mills; Kennedy, chairman of the Senate Health Subcommittee; Rep. Paul G. Rogers (D.-Fla.), chairman of the House Health Subcommittee; and Sen. Russell B. Long (D.-La.).

Both the Ways and Means Committee and the Senate Finance Committee held extensive hearings on national health insurance during the

92nd Congress but the legislative process must start anew because all pending bills die automatically at the end of a two-year Congress.

Medigap, slated for early introduction, is being expanded to include home care and limited dental benefits. In the 92nd Congress, Medigap had 174 sponsors, by far the largest number for any national health insurance legislation.

Kennedy, with the support of organized labor, sponsored the most costly plan in the 92nd Congress. It also called for extensive reorganization of the nation's health care delivery system with the government having a dominant role. At this writing, he had not disclosed any details of his new bill.

He and Mills have conferred on national health legislation to see if they could agree on a program. In a recent speech, Kennedy said that Mills "and I plan to jointly introduce such legislation early next year (1973)." But Mills has not gone quite this far, at least in his public statements. Last fall Mills said of his talks on the matter with Kennedy:

"We found wide areas of agreement. But obviously there were key areas where we did not—particularly in the financing and administrative areas. It may be that as we continue to discuss these areas further agreement can be made. I think I will be able to convince him that reliance on the Federal treasury and the Federal bureaucrat is not the best way to accomplish our common objectives."

The Bureau of Narcotics and Dangerous Drugs has proposed restricting sales of nine barbiturates which were described as highly addictive and linked to 1,771 suicides and deaths in 17 months.

The Bureau said the barbiturates are more dangerous than heroin.

"Withdrawal from the use of these drugs can be fatal and, in many instances, withdrawal symptoms are more severe from a barbiturate habit than from heroin addiction," BNDD Director John E. Ingersoll said.

He identified the barbiturates by their generic names as amobarbital, butabarbital, cyclobarbital, heptabarbital, pentobarbital, probarbital, secobarbital, talbutal and vinbarbital. He listed only five brand-name drugs: seconal (secobarbital), tuinal (amobarbital and secobarbital), anytol (amobarbital), neumbital (pentobarbital) and butisol (butabarbital).



The BNDD Director asked the Food and Drug Administration to place the nine barbiturates under the same controls for cocaine, morphine, codeine, methadone and amphetamine.

\* \* \*

W. R. Barclay, M.D., assistant executive vice president of the American Medical Association, said that the AMA reserves the right to reject drug advertising even if it conforms to Food and Drug Administration regulations.

He said the AMA had accepted the FDA's authority as to drug advertising when it was promulgated in 1968 "after determining that the regulations would provide adequate screening and furthermore would have the advantage of being consistently applied to all medical publications, not just AMA journals."

However, Dr. Barclay added, the AMA reserved the further right of rejection, not only as to drugs but to other products too, "if the proposed ad is judged to be in poor taste, if the layout would cause confusion with the editorial content of the journal or if the ad is for a product, service or book which is not covered by FDA regulations and which in AMA's opinion does not meet our standards of acceptability."

Dr. Barclay said the impact of advertising on drug prescribing, use and misuse is not known.

"No scientific data have been developed on this question, and no reliable method has been proposed to acquire such data," Dr. Barclay said. "Ads placed in scientific journals reach a well educated, well informed and broadly experienced audience that has access to many sources of scientific information. Since all material in such ads has been judged by FDA to be correct and accurate it is difficult to see how such advertisements could adversely affect prescribing practices. In spite of the plethora of information available to physicians, AMA has developed and distributed without charge to its members its own evaluation of drug products. This book is titled *AMA Drug Evaluations* and is usually referred to as "ADE." Unfortunately, we are in no better a position to judge the impact of this book than we are to judge the impact of advertising or editorial copy in our journals."

Dr. Barclay outlined the AMA's position at a public hearing of the National Council of Churches.

\* \* \*

The Department of Health, Education and

Welfare has ended a 40-year study of the effects of untreated syphilis among a group of black men in Alabama.

Assistant HEW Secretary Merlin K. DuVal announced the end of the Public Health Service study after receiving an investigatory report from a HEW-appointed citizens' advisory board.

When it began in 1932 in rural Alabama, the study involved more than 400 black men with syphilis and another 200 who did not have the disease and were used for comparisons. Of the 125 survivors, 50 were in the nondiseased control group.

In its report to DuVal, the panel said, "No convincing evidence has been presented to this panel that participants in this study were adequately informed about the nature of the experiments, either at its inception or subsequently," and added:

"The U.S. Public Health Service from the onset of the study has maintained a continuous policy of withholding treatment for syphilis from the infected subjects. There was common medical knowledge, before this study, that untreated syphilitic infection produces disability and premature mortality."

"The study of untreated syphilis in black males in Macon County, Ala., now known as the Tuskegee Syphilis Study, should be terminated immediately," the panel said.

Autopsies to determine the effects of untreated syphilis were discontinued several months ago.

During the experiment at least 28 men are known to have died of syphilis.

\* \* \*

Government scientists believe they have found the cause of intestinal flu, the ailment that frequently sweeps through a community or an office causing 24 to 48 hours of nausea, vomiting, diarrhea and abdominal cramps in its victims.

They call it "Norwalk agent."

Doctors have generally called the disease acute infectious non-bacterial gastroenteritis because a specific cause had not been identifiable. The ailment is not to be confused with the sometimes deadly influenza which occasionally causes international epidemics.

Scientific investigators for the National Institutes of Allergy and Infectious Diseases, working from a 1968 outbreak of the disease in Norwalk, Ohio, and using the latest techniques

in scientific photography, claim to have captured the elusive "Norwalk agent" on film.

\* \* \*

Frank J. Rauscher, Jr., M.D., director of the National Cancer Institute, says that "some very important progress is being made" in cancer research and that the day soon may come when a single drop of a person's blood will be tested to diagnose the disease.

"In fact, I would say that our knowledge of cancer—what causes it, how it can be prevented, how to spot it in early stages, and how to treat it—has advanced more in the last two years than in the previous 50," Dr. Rauscher said.

He made his prediction in a copyrighted interview published in U.S. News & World Report.

But he predicted that in 1973 about 645,000 new cases of cancer will be discovered in the United States and that 350,000 Americans will die from the 100 or so forms of the disease.

Rauscher said from 300 to 400 institutions were grappling with the problems of cancer and that they were making "tremendous strides." He estimated the total being spent each year, both public and private, at \$750 million.

Elsewhere on the cancer research front:

Seven American cancer scientists went to Russia and for two weeks exchanged information on cancer viruses with leading Soviet scientists in the U.S.S.R. The exchange was part of the U.S.-U.S.S.R. health agreement to share research results from cancer, heart disease and environmental studies which was signed in Moscow in May, 1972, during President Nixon's summit meeting. As part of the exchange agreement, the U.S. scientific delegation will present to Soviet scientists 31 strains of cancer viruses affecting chickens, cats, rodents, and non-human primates, as well as a possible human tumor virus from a muscle cancer. James F. Holland, M.D., a specialist in treating cancer by drugs, has been named to work in the Soviet Union for one year to help carry out the new U.S.-U.S.S.R. program.

—A multi-disciplinary cancer research program will be established at the Weizmann Institute of Science in Rehovot, Israel, under a \$447,000 research contract awarded by the National Cancer Institute. Several research topics will be investigated, including the roles of various white blood cell populations in the body's defense against cancer, and methods that may induce leukemia cells to mature normally.

Attempts also will be made to further develop tests that offer hope for early cancer detection and diagnosis.

## medical news in tennessee

### Meharry Medical College

Dr. C. W. Johnson, dean of the Graduate School of Meharry Medical College, has announced a significantly advanced prototype of a "generalized artificial internal organ." The device serves both as an artificial lung or as an artificial kidney and does so several times more effectively than any other available device.

Dr. Allen Zelman, assistant professor of Biophysics and Neurobiology and head of the Artificial Internal Organs Laboratory at Meharry Medical College, initiated the project two years ago while on a bioengineering post-doctoral traineeship at Carnegie-Mellon University, Pittsburgh, Pennsylvania.

Dr. M. Weissman, associate professor of Chemical Engineering and Biotechnology at C-M U, conceived the idea of etching capillaries onto plates in order to produce a more effective artificial lung while Dr. Zelman developed the microchannel system and designed the supporting framework.

The project was funded initially by C-M U with an NIH research grant and the final development and construction costs were met jointly by C-M U through a NIH research grant, and Meharry Medical College through a Minority Schools Biomedical Science grant.

### TMS-RMP Names Area Coordinators

Ms. Sue Patterson and Mr. Richard Eddy have been named as new Area Coordinators for the Tennessee Mid-South Regional Medical Program.

Ms. Patterson is assigned to the South East Tennessee area which includes Bedford, Coffee, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Wayne, Perry and Franklin counties.

Mr. Eddy is assigned to the Upper East Tennessee area which includes Washington, Sullivan, Hancock, Hawkins, Unicoi, Green, Carter and Johnson counties.



### 43 Receive AMA Recognition Award

Forty-three Tennessee physicians have been named recipients of the 1972 Physicians' Recognition Award by the American Medical Association.

The physicians fulfilled the requirements of the Award by participating in Continuing Medical Education activities.

Established by the AMA in 1968, the Award is granted to those physicians who have completed a minimum total of 150 credit hours of continuing medical education over a continuous three-year qualifying period. The qualifying period of the 1972 Award began on July 1, 1969, and ended, June 30, 1972.

The recipients are: John R. Adams, Memphis; Andres S. Alisago, Jr., Chattanooga; Hazel Earl Atherton, Memphis; Robert O. Baratta, Nashville; Edward J. Battersby, Nashville; Spencer Y. Bell, Knoxville; Warren R. Berrie, Nashville; Robert L. Bomar, Jr., Nashville; John H. Burkhart, Knoxville; Richard M. Butler, Memphis; John J. Carolan, Nashville; Richard F. Carver, Johnson City; Michael S. Clarke, Memphis; Blaine C. Collins, Memphis; Archimedes Abad Concon, Memphis; Frederick E. Cox, Memphis; Jerry J. Crook, Knoxville; William A. Crosby, Dickson; Collin L. Durham, Jr., Bolivar; William E. Foree, Jr., Athens; Mable T. Garner, Nashville; Raymond L. Hargrove, Knoxville; Thomas W. Higginbotham, Memphis; Robert M. Hollister, Franklin; William A. Kean, Nashville; Charles N. Kendall, Hendersonville; Carl E. Lane, Nashville; Edward W. McReynolds, Memphis; Kenneth Cheuk-Fai Pau, Chattanooga; Jesse R. Peel, Nashville; Edgar E. Perry, Elizabethton; Billie H. Putman, Memphis; Jorge E. Cabrera Salazar, Memphis; Arthur T. Scherer, Memphis; Robert H. Shipp, Nashville; Montie E. Smith, Jr., Selmer; Somkeart Srisupundit, Nashville; Robin M. Stevenson, Memphis; Carson E. Taylor, Lawrenceburg; Troy A. Walker, Clarksville; Julian K. Welch, Jr., Brownsville; Joan B. Woods, Oak Ridge; and Khalid A. Yoosfani, Chattanooga.

### Chattanooga-Hamilton County Medical Society

The Society held its annual meeting on December 5, in the Interstate Building auditorium. Officers for the 1973 year were installed. They are Charles H. Alper, M.D., president; J. Lee

Arnold, M.D., president-elect, and Paul E. Hawkins, M.D., secretary-treasurer.

### Knoxville Academy of Medicine

The Academy held its annual meeting December 12 in the KAM Building. Review and reports of the year's work were given and new officers were installed as follows: Felix G. Line, M.D., President; Mark Fecher, M.D., president-elect; John R. Nelson, Jr., M.D., vice-president; Ira Pierce, M.D., Secretary; William Laing, M.D., Treasurer. The Executive Committee includes Mary Duffy, M.D., John W. Campbell, M.D. and Daniel F. Beals, M.D. The outgoing president, Dr. Whittaker, recently appointed two special committees, the Ad Hoc Committee on East Tennessee Chest Disease Hospital composed of Richard C. Sexton, M.D., Chairman, Alfred D. Beasley, M.D., and Robert W. Newman, M.D. Also, an Ad Hoc Committee for Distinguished Service Awards of TMA was appointed with Robert B. Wood, M.D., Chairman, Robert B. Gilbertson, M.D., and John D. Moore, Sr., M.D.

### Tipton County Medical Society

A survey was conducted in Tipton County in 1969 which revealed that many of the residents were suffering from lesions known as actinic keratoses. As a result of this survey, the Tipton County Medical Society has agreed to participate in the treatment of patients showing evidence of this problem. The program is being conducted in cooperation with the University of Tennessee. Medication is already available which has been effective in the treatment of these lesions. Dr. Z. W. Mally, University of Tennessee Professor of Dermatology stated that the patients will be surveyed at a later date for any signs of recurrence of these pre-cancerous lesions following the period of treatment and recovery. A major pharmaceutical company is supplying the medication for the study without charge and the local physicians are treating the patients and recording results.

## personal news

DR. CRAWFORD W. ADAMS, Nashville, was elected treasurer of American College of Chest Physicians during the October, 1972 meeting in Denver.

DR. WILLIAM F. BURNETT, Jackson, and DR. JAMES T. CRAIG, JR., Jackson, have been initiated



as Fellows in the American College of Surgeons at the October meeting of the College in San Francisco.

DR. DUANE CARR, Memphis, has been named clinical professor of surgery emeritus at the University of Tennessee College of Medicine.

DR. C. ROBERT CLARK, Chattanooga, was honored by the Downtown Sertoma Club with the Service to Mankind Award which is presented for "humanitarian and civic service to the community."

DR. JAMES CLEVELAND, Englewood, has been named chairman of the Board of Trustees of Epperson Hospital for 1973.

DR. THOMAS W. CURREY, Chattanooga, has joined DR. C. ROBERT CLARK and DR. H. BARRETT HEYWOOD in the practice of orthopedic surgery at the Whitehall Medical Center.

DR. JOHN S. DERRYBERRY, Shelbyville, has been named president-elect of the Tennessee Academy of Family Physicians. Also, DR. ARCH Y. SMITH of Signal Mountain was elected vice-president during the Association's recent annual meeting.

DR. THOMAS C. DUNCAN, Huntsville, Alabama, has been elected president of the Board of Directors of the University of Tennessee at Martin Alumni Council.

DR. EUGENE FOWINKLE, Nashville, Commissioner of Public Health, has been installed as president of the American Association of Public Health Physicians.

DR. DONALD GOSS, Nashville, is serving a ten-week tour of duty aboard the SS HOPE.

DR. JAMES B. GREEN, JR., Memphis, recently spoke on "Current Treatment of Breast Cancer" at the meeting of the Methodist Hospital Auxiliary.

DR. FRED W. HODGE, Knoxville, has been named chief of staff of East Tennessee Children's Hospital succeeding DR. JOHN R. MADDUX, JR.

DR. BEN F. HOUSE, Jackson, spoke to the Jackson Area Lay Unit of the Tennessee Diabetes Association at a recent monthly meeting.

DR. LEWIS HOWARD, Harriman, has announced that he will close his local practice and will accept a position with Veteran's Administration.

DR. G. BAKER HUBBARD, Jackson, served as counselor from Tennessee during the recent Southern Medical Association meeting in New Orleans.

DR. CLARENCE L. JONES, Cookeville, and DR. GEORGE W. JENKINS, Cookeville have been named diplomates of the American Board of Family Practice. Dr. Jones was previously in residency in anesthesiology in Memphis but resumed practicing in Cookeville on January 1, 1973.

DR. JAMES G. HUGHES, Memphis, chairman of pediatrics at the UT Medical Units, has been appointed medical director at Le Bonheur Children's Hospital.

DR. ROBERT F. LASH, Knoxville, has designed and directs the emergency medical service at UT sporting events. He has assembled a team of about 80 physicians, nurses, cardio-pulmonary resuscitation technicians, paramedics and emergency medical technicians

to assist spectators who become ill or have accidents at sporting events.

DR. ROBERT P. MCBURNEY, Memphis, has been elected president-elect of the Baptist Hospital Medical Staff.

DR. VERNON E. MCNEILUS, Harriman, has opened an office limited to the practice of orthopedics.

DR. B. F. OVERHOLT, Knoxville, has been elected member-at-large of the City Board of Education. Dr. Overholt was also the guest speaker at the West Knoxville Sertoma Club at a recent weekly meeting.

DR. FRED OWNBY, Nashville, recently spoke at the Manchester Rotary Club in Manchester.

DR. JOHN D. PARKINSON, Cookeville, has presented a series of five lectures on marriage at St. Therese Catholic Church in Breen Hall.

DR. M. F. PERRIN, Chattanooga, was elected president-elect of the 1973 Heart Fund. Also, DR. J. ED. STRICKLAND, Chattanooga, was elected physicians' division chairman.

DR. WALTER A. PETERSON, JR., Chattanooga, has formed a partnership with DR. REID L. BROWN for the general practice of medicine.

DR. MAURICE S. RAWLINGS, Chattanooga, was guest speaker at the Administrative Management Society meeting held recently at the Read House.

DR. ROBERT E. RICHIE, Nashville, has been named chief of staff of Veterans Administration Hospital succeeding DR. W. G. GOBBEL, JR. who has resigned after a 14-year tour of duty.

DR. JERRY ROGERS, Lenoir City, has opened practice in association with DR. WALTER SHEA. Dr. Rogers comes to Lenoir City from Knoxville where he served as Emergency Room physician at Baptist and UT Hospitals for three years.

DR. WILLIAM G. SHELTON, Dyersburg, has retired from his position as county health officer after 60 years in the county.

DR. JERRY L. SHIPLEY, originally from Cookeville, has opened practice in Byrdstown in association with DR. B. H. COPELAND.

DR. M. ALFORD TODD, Lafayette, has opened an office for the practice of medicine and surgery.

DR. NAT WINSTON, Nashville, spoke at the dedication services at Sequatchie General Hospital in Dunlap.

DR. JOHN B. YOUNG, Franklin, has been elected honorary member in the International Health Society of the United States.

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The following physicians have been named Fellows in the American Academy of Family Physicians: Dr. Robert Clendenin, Union City; Dr. Thomas G. Cranwell, Pikeville; Dr. Paul A. Ervin, Crossville; Dr. Charles G. Graves, Jr., Dunlap; Dr. Jack R. Holifield, Tiptonville; Dr. Maxwell Huff, Oneida; Dr. Horace Mott Leeds, Oneida; Dr. Telford A. Lowry, Sweetwater; Dr. Oscar McCallum, Henderson; Dr. Charles A. Mitchell, Sparta; Dr. James R. Quarles, Springfield; Dr. James H. Ragsdale, Union City; Dr. William N. Smith, New Tazewell; and Dr. John B. Turner, Springfield.



## book reviews

**Malnutrition, Its Cause and Control**, Robson, J. R. K., Volumes I and II, Gordon and Breach, New York, 1972.

These excellent volumes are by John Robson, M.D., of the School of Public Health, University of Michigan, in collaboration with his colleagues of the same school, Francis A. Larkin, Ph.D., and Anita M. Sandretto, M.P.H., and with Bahram Tadyyon, Ph.D., of the Mashad University, Mashad, Iran. The purpose of the authors is to demonstrate malnutrition as an ecological problem, relating it to physiology, pathology, human behavior, and many factors constituting the ecology of food and nutrition. The first two chapters concern nutrition as a global problem, and the ecology and the etiology of malnutrition.

The authors have addressed themselves to certain questions, such as the manifestations of malnutrition and the setting of malnutrition, normal nutritional states, and nutritional requirements, evaluation of nutritional status, and how to promote better nutrition and to relieve existing malnutrition.

The format is good and the text quite readable, with numerous excellent photographs, charts, and tables. Many linedrawings are present as well. In spite of this, it is a technical work, and would not be of much help to the practicing physician. It is primarily a work of nutritionists, including public health workers and nurses.

**Confessions of a Gynecologist** by an anonymous M.D., Doubleday and Company, New York, 1972.

I am not sure who this book was written for, whether for the medical profession or for the gynecologic patient, which includes potentially all women. Either group would be entertained, and it might also be instructive for both groups. The author writes with a light touch, while at the same time giving various discussions on such things as why he opposes natural childbirth and believes fathers should not be in the delivery room. He also warns against old wives' tales and helpful advice which he considers to be one of the most worrisome aspects of pregnancies, with the capability of doing considerable emotional harm to unsuspecting young women.

A note on the dust jacket by Dr. Morris Fishbein says, "Every woman would profit by this book, which is just like sitting at the doctor's desk and hearing him tell it like it is." She might indeed, and so might you.

**Female Sex Anomalies**, Cary M. Dougherty, M.D. and Rowena Spencer, M.D., Harper and Row, Hagerstown, Md., 1972. \$12.75.

This well-written and beautifully illustrated book by Dr. Dougherty, Clinical Professor of Obstetrics and Gynecology at Louisiana University State School of Medicine, and Dr. Spencer, Clinical Associate Professor of Surgery (Pediatric Surgery), Tulane University School of Medicine, is a book which would be more useful to the gynecologist and pediatrician than to other specialists, but might prove useful to the family physician. It is a very complete work in a very nar-

row field, and goes into the embryology of the female reproductive system rather thoroughly. It then takes up anomalies in the fetus and infant, and then anomalies of the reproductive tract generally.

The book can be recommended for those interested in this narrow field.

**Common Problems In Office Practice: Current Methods of Diagnosis and Treatment**, Robert B. Taylor, M.D., Harper and Row, Hagerstown, Md. Paperback, \$9.95.

This book should be of inestimable value to a young practitioner starting out, but just might also be of value to a more established practitioner, and he would do well to look at the first chapter which has to do with office practice in general. Anyone might take some pointers from this.

The book is arranged in major subheadings: Internal Medicine, Dermatology, Infectious Disease, Pediatrics, Urology, Gynecology, Surgery, Orthopedics, Psychiatry, and Drug Abuse. Topics are arranged alphabetically under these major subheads. They consist of the major problems that a physician will face in his office. As an example, under gynecology is listed Contraception, Dysmenorrhea, Menopause, Pregnancy, Premenstrual Tension, Vaginal Bleeding, and Vaginitis.

In addition to the thorough coverage, the writing style is readable and lucid, and the author writes with humor about some vexing problems. Coverage on each of the problems includes manifestations, management, and special diagnostic procedures. At the end of each chapter is a reference list on each subject covered, with six to eight pertinent references extending up through 1971. This might be a handy volume to have around the office.

**Diseases of the Vulva**, Nikolas A. Janovski, M.D., and Charles Douglas, M.D., Harper and Row, Hagerstown, Maryland, 1972. Cloth, 122 pages plus index. \$17.50.

This small but handsome volume is a very complete and extensive treatise on the diseases of the vulva, written by Dr. Janovski, a pathologist at Northwestern Medical School, and Dr. Douglas, Professor of Obstetrics and Gynecology at the University of London. The authors have a particular interest in diseases of the vulva, both being founding fellows of the International Society for the Study of Vulvar Disease. The work is very extensively illustrated, approximately half of the illustrations being beautifully reproduced in color. The coverage is very complete, both from a clinical and anatomical point of view, including excellent photomicrographs.

In each instance, both diagnosis and therapy are given rather complete coverage, and at the end of the volume there is a very extensive bibliography, listing all of the major American and European contributions to the field.

This volume should prove valuable to the gynecologist and gynecologic pathologist, but should also be of interest, and probably of considerable help, to the family physician who sees gynecologic problems, since it covers in addition to the more exotic lesions, those commonly found in office practice, and which are treatable in the office. This volume can be highly recommended to any physician who handles gynecologic problems in any way.



**Synopsis of Gross Anatomy, 2nd Edition**, John B. Christensen, Ph.D., and Ira R. Telford, Ph.D., Harper and Row, Hagerstown, Maryland, 1972. Paper, 270 pages plus index, \$10.95.

For its size, this volume is a rather complete outline of anatomy, well-illustrated by line drawings, with accompanying tables. The print is quite readable and large, with anatomic structures listed in bold face. This would not be a substitute for a more complete anatomy text, but would be useful as an adjunct to it. Its greatest use would probably be in a physician's office, the ward, or the operating room, where a quick reference is needed.

**Dermal Pathology**, James H. Graham, M.D., Wayne C. Johnson, M.D., and Elson B. Helwig, M.D., Harper and Row, Hagerstown, Maryland, 1972. 790 pages plus index, 1155 illustrations, with 77 color plates. Cloth, \$45.00.

This beautifully illustrated volume is the long awaited product of the Postgraduate Course in Dermal Pathology which just completed its 14th annual presentation. Dr. Graham is currently Professor of Medicine, Chairman of the Division of Dermatology, and Professor of Pathology, Director of the Section of Dermal Pathology at the University of California Irvine Campus. Dr. Johnson is Professor of Dermatology and Associate Professor of Pathology at Temple University School of Medicine, and Director of the Laboratory of the Skin and Cancer Hospital at Philadelphia. Dr. Helwig is Chief of Pathology and of the Branch of Dermal Pathology, Armed Forces Institute of Pathology. These three individuals are joined by a number of other outstanding members of the field of dermal pathology to produce what must be considered the outstanding work in this field, and certainly the most extensively illustrated.

The various types of lesions are taken up in sequence, and are discussed both as to clinical manifestations and histologic appearance. At the end of each chapter, there is an extensive reference list, including all the major works in a given area. One of the major features is a very complete and beautifully presented section on techniques for preparation of skin for histopathologic study, by Lee G. Luna, HT (ASCP), Chief, Histopathology Laboratories Division, Armed Forces Institute of Pathology. There is also a section on biopsy and gross tissue techniques, and another on histochemistry of the skin, by Dr. Johnson, and a section on the ultrastructure of the human epidermis by Dr. Alvin S. Zelickson. There is a beautiful presentation of the anatomy and histology of the skin by Dr. Herman Pinkus.

This volume lives up to the expectations of those who know the writers. It is an expensive volume, but I am sure will be considered a necessity for the library of pathologists and dermatologists.

**Textbook of Electrocardiography**, by David Littmann, M.D., Harper and Row, Hagerstown, Md., 1972. \$22.50.

This well-written book in an attractive format by Dr. Littmann, who is on the faculty of Harvard and Tufts Medical Schools, is a thorough coverage of the subject of electrocardiography. He goes quite thoroughly into the electrophysiology of the electrocardiogram,

discussing the normal electrocardiogram before proceeding to the abnormal findings. He then takes up in order hypertrophy, with strain, enlargement, and preponderance; disorders of conduction; coronary heart disease; the electrocardiogram in specific disorders; the non-specifically abnormal electrocardiogram; and the unknown electrocardiogram.

There is an extensive reference list at the end of each chapter, which appears to be very complete. A useful feature is the divided index, which gives an index to electrocardiographic features, as well as a general index.

This should be a useful book for students, house officers, and internists who work in electrocardiography. Dr. Littmann states in his preface that "The illustrations are sufficiently inclusive to serve as an atlas of electrocardiography for the cardiologists and internists." In this I concur.

#### BRIEFLY NOTED

**Eaters' Digest: THE CONSUMERS FACT BOOK OF FOOD ADDITIVES**, Michael F. Jacobsen, Doubleday and Company, Garden City, New York, 1972.

**The Anesthesiologist's Handbook**, Donald G. Catron, University Park Press, Baltimore, Md., 1972. Paper, 140 pages plus index.

#### LANGE MEDICAL PUBLICATIONS SERIES

Listed below are more volumes in the series of Lange Medical Publications which include handbooks and reviews of a wide variety of topics in the medical field. These volumes are particularly valuable for their inexpensive format and frequent updating. This allows them to be kept current, and therefore of particular value to the practicing physician as well as the student and resident. The listed authors are in fact only editors, each section being written by an authority in the particular topic. Coverage in each of the volumes is very complete, and it can be recommended as a valuable adjunct to office practice. Lange Medical Publications, Los Altos, Cal. 1972.

**General Urology**, 7th Ed., Donald R. Smith. Paper. 427 pages plus index.

**Medical Microbiology**, 10th Ed., Ernest Jowetz, Joseph L. Melnick, Edward A. Adelberg. Paper. 504 pages plus index.

**Medical Pharmacology**, 3rd Ed., Frederick H. Meyers, Ernest Jowetz and Allen Goldfien. Paper. 662 pages plus index.

**Current Pediatric Diagnosis and Treatment**, 2nd Ed. by C. Henry Kempe, M.D., Henry K. Silver, M.D. and Donough O'Brien, M.D. Paper, 982 pages plus index. \$12.00.

**Handbook of Medical Treatment**, Milton J. Chatton, 13th Ed. Paper. 620 pages plus index. \$6.50.

This small volume is just what it says: a fairly complete small handbook which will fit in the house officer's pocket or in the doctor's bag. It covers most of the common situations quite thoroughly, both by system and by topic. It should be quite a valuable little volume for almost any physician, student, or house officer.



## CALENDAR OF MEETINGS

### STATE

April 11-14 Tennessee Medical Association, Annual Meeting, Sheraton-Peabody Hotel, Memphis

### NATIONAL

January 22-24 Society of Thoracic Surgeons, Shamrock Hilton Hotel, Houston

January 24-28 American College of Psychiatrists, Royal Orleans Hotel, New Orleans

January 26-28 Southern Radiological Conference, 17th Annual, Grand Hotel, Point Clear, Alabama

February 1-6 American Academy of Orthopaedic Surgeons, Las Vegas

February 7-9 American Academy of Occupational Medicine, Royal Orleans Hotel, New Orleans

February 9-16 American Society of Clinical Pathologists, Sheraton Wakiki Hotel, Honolulu, Hawaii

February 10-11 AMA Congress on Medical Education, 69th Annual, Palmer House, Chicago

February 12-15 Southeastern Surgical Congress, Marriott Motor Hotel, New Orleans

March 29-30 AMA National Conference on Rural Health, 26th Statler-Hilton, Dallas

April 1-4 American College of Surgeons, Spring Meeting, Hilton and Americana Hotels, New York

April 2-7 American College of Radiology, St. Francis Hotel, San Francisco

April 3-5 American Academy of Facial Plastic and Reconstructive Surgery, Chase Park Plaza Hotel, St. Louis

April 6-8 American Society of Internal Medicine, Palmer House, Chicago

April 9-12 American Academy of Pediatrics, Spring Session, Sheraton-Boston Hotel, Boston

April 9-13 American College of Physicians, Conrad Hilton, Chicago

April 16-18 American Association for Thoracic Surgery, Fairmont Hotel, Dallas

April 16-19 American Association of Neurological Surgeons, Century Plaza Hotel, Los Angeles

April 23-28 American Academy of Neurology, Sheraton-Boston Hotel, Boston

April 25-27 American Surgical Association, Century-Plaza Hotel, Los Angeles

## ACP Regional Meetings and Postgraduate Courses

### 1973 REGIONAL MEETINGS

*Louisiana-Mississippi* Regional Meeting, American College of Physicians, Feb. 23-24, Royal Sonesta Hotel, New Orleans, La. INFO: A. Sheldon Mann, M.D., 1514 Jefferson Highway, New Orleans, La. 70121

*Missouri* Regional Meeting, American College of Physicians, Feb. 23-24, Ramada Inn, St. Louis, Mo. INFO: Thomas F. Frawley, M.D., St. Louis Univ. Hospital, 1325 S. Grand Blvd., St. Louis, Mo. 63104

*Alabama* Regional Meeting, American College of Physicians, March 2-3, Grand Hotel, Pt. Clear, Ala. INFO: Alwyn A. Shugerman, M.D., 1815 11th Avenue, Birmingham, Ala. 35205

*South Carolina* Regional Meeting, American College of Physicians, March 9-10, Matador Motor Inn, Columbia, S.C. INFO: Vince Moseley, M.D., 51 E. Bay, Charleston, S.C. 29401

*Virginia* Regional Meeting, American College of Physicians, March 16-17, Williamsburg Inn, Williamsburg, Va. INFO: W. Taliaferro Thompson, Jr., M.D., 4602 Sulgrave Rd., Richmond, Va. 23221

### 1973 POSTGRADUATE COURSES

These courses are arranged through the cooperation of the directors and the institutions involved. Registration forms and requests for information are to be directed to: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104. Tuition Fees: ACP Members and Fellows, \$80; Non-members, \$125; Associates, \$40; Other Residents and Research Fellows, \$80.

Date	Course Title and Location
Feb. 8-10, 1973	RECENT ADVANCES IN THE IMMUNOPROPHYLAXIS AND CHEMOTHERAPY OF INFECTIOUS DISEASES, University of Arizona College of Medicine, Tucson, Ariz.
Feb. 26-Mar. 2, 1973	CLINICAL GASTROENTEROLOGY, University of Michigan Medical Center, Ann Arbor, Mich.
Mar. 5-8, 1973	PROBLEMS OF INTERNATIONAL HEALTH, Naval Dept., San Diego, Calif.
Mar. 5-8, 1973	MODERN NEUROLOGICAL DIAGNOSIS AND THERAPY, University of Miami School of Medicine, Miami, Fla.
Mar. 12-16, 1973	INFECTIOUS DISEASES, University of Maryland School of Medicine, Baltimore, Md.
Mar. 14-16, 1973	CLINICAL PHARMACOLOGY: RATIONAL BASIS OF THERAPEUTICS, Univ. of California School of Medicine, San Francisco, Calif.

- Mar. 19-23, 1973 FOUR AND ONE-HALF DAYS OF INTERNAL MEDICINE: WHAT'S NEW? University of Alabama School of Medicine, Birmingham, Ala.
- Mar. 22-24, 1973 CLINICAL RECOGNITION AND MANAGEMENT OF HEART DISEASE—1973, University of Arizona Medical Center, Tucson, Ariz.
- Mar. 26-30, 1973 CARDIOLOGY — 1973 — TOPICS OF CURRENT INTEREST, Mount Sinai School of Medicine, New York, N.Y.
- Apr. 4-6, 1973 RECENT ADVANCES IN DIAGNOSIS AND MANAGEMENT OF PULMONARY DISEASE, Virginia Mason Medical Center, Seattle, Wash.
- Apr. 24-27, 1973 PULMONARY DISEASE, University of Pennsylvania School of Medicine, Philadelphia, Pa.
- Apr. 25-27, 1973 HEPATOBILIARY DISEASE IN CLINICAL PRACTICE, University of California, San Francisco
- Apr. 25-27, 1973 ADVANCES IN DIAGNOSIS AND MANAGEMENT OF INFECTIOUS DISEASE, University of Wisconsin, Madison, Wis.
- May 16-18, 1973 THE RHEUMATIC DISEASES—CLINICAL AND IMMUNOLOGICAL ASPECTS, University of Texas Southwestern Medical School, Dallas, Tex.
- May 16-18, 1973 CLINICAL AUSCULTATION OF THE HEART, Georgetown University Hospital, Washington, D.C.
- May 21-25, 1973 INTERNAL MEDICINE: CURRENT CONCEPTS OF CLINICAL PROBLEMS, University of Cincinnati Medical Center, Cincinnati, Ohio.
- May 21-25, 1973 INTENSIVE CARE UNITS, St. Vincent's Hospital and Medical Center of New York, New York, N.Y.
- May 29-June 1, 1973 RECENT ADVANCES IN ENDOCRINOLOGY AND THEIR CLINICAL APPLICATIONS, Royal Victoria Hospital, Montreal, Que., Can.
- June 4-8, 1973 HEMATOLOGY, University of Washington School of Medicine, Seattle, Wash.
- June 13-15, 1973 ONCOLOGY AND CHEMOTHERAPY, University of Southern California, Los Angeles, Calif.
- June 18-22, 1973 CLINICAL ASPECTS OF BLOOD TRANSFUSION, Michigan State Univ., East Lansing, Mich.
- June 25-29, 1973 ADVANCES IN INTERNAL MEDICINE: RECENT PERSPECTIVES, 1973, Banff, Alta., Can.

## University of Tennessee CME Courses

The following continuing education courses are being offered by the University of Tennessee College of Medicine during 1973:

<i>Date of Courses:</i>	<i>Course:</i>
March 5-9, 1973	Fundamentals of Otolaryngology
March 17-18, 1973	Pediatric Anesthesia
March 26-31, 1973	General Review Course for the Family Physician
April 2-3, 1973	A Clinical Approach to Common Skin Problems
April 12-13, 1973	Conference on the Exceptional Child
May 9-11, 1973	Pulmonary Disease
May 9-12, 1973	Clinical Electrocardiography (Paris Landing State Park Inn, Buchanan, Tennessee)
May 14-18, 1973	Intensive Review of the Science of Anesthesiology
May 20-23, 1973	Basic Principles of Rhinoplasty

## Vanderbilt University CME Courses

<i>Dates of Courses:</i>	<i>Title, Location, Program Coordinator</i>
March 8, 1973	Death and Dying, Location to be announced, Mr. Robert Reber
March 16-17, 1973	Renal Insufficiency, University Club of Nashville, Earl Ginn, M.D.
March 23-24, 1973	2nd Annual Dragstedt Surgery Symposium, Underwood Auditorium, Vanderbilt, John Foster, M.D.
April 4-6, 1973	Critical Care (co-sponsor, American College of Physicians), Underwood Auditorium, Vanderbilt, Ms. Norma Shephard
April 27-28, 1973	Pros and Cons of Group Practice (Organization Alternatives in Medical Practice), University Club of Nashville, Paul Slaton, M.D.
May 23-24, 1973	13th Annual Seminary in Psychiatry, Location to be announced, Vergil Metts, M.D.
July 11-12, 1973	Ky. Med. Assn., Annual Meeting, Lake Barkley, Kentucky.
Sept. 19-21, 1973	Endocrinology (American College of Physicians), Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.
Sept. 26-28, 1973	The Injured Child (American Academy of Orthopedic Surgeons), Underwood Auditorium, Vanderbilt, John Connolly, M.D.



- Oct. 10-12, 1973      Hypertension (American College of Cardiology), Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.
- Oct. 25-27, 1973      Child Neurology, Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

### Provocative Allergy Course

A practical course in the technique of intradermal provocative food testing and food injection therapy will be offered Saturday and Sunday, March 10-11, 1973, at the Admiral Semmes Hotel, P. O. Box 1209, Mobile, Alabama 36601. The course will also cover inhalants, chemicals, drugs, fungi, yeasts, viruses, hormones, terpenes, air-pollutants, insects, and contact dermatitis.

The registration fee of \$125.00 also covers one dinner and two luncheons. To register for the course, send name, address, and check (payable to Provocative Allergy Course) to: Joseph B. Miller, M.D., 3 Office Park, Suite 110, Mobile, Alabama 36609. Room reservations should be made directly with the hotel.

### 22nd Annual Postgraduate Course in Pediatrics

The 22nd Annual Postgraduate Course in Pediatrics of the University of Texas Medical Branch will be held in Galveston, Texas, March 15 and 16, 1973. The course will emphasize "Problems of Office Pediatrics" with guest lecturers Victor C. Vaughan, II, M.D. and John B. Reinhart, M.D.

This program is acceptable for 112 prescribed hours by the American Academy of General Practice and registration fee will be \$75.00. Further information will be furnished by Lillian H. Lockhart, M.D., Chairman, Pediatric Postgraduate Committee, the University of Texas Medical Branch, Galveston, Texas 77550.

### Neurotology Course

The Department of Otolaryngology of the Abraham Lincoln School of Medicine and the University of Illinois Hospital Eye and Ear Infirmary, University of Illinois at the Medical Center, will conduct a continuing education course in Neurotology, March 26-29, 1973. This four day intensive course will offer a didactic and practical review of clinical neurotology under the direction of Nicholas Torok, M.D. It will be held at the Eye and Ear Infirmary and will include basic vestibular physiology and pathophysiology, commonly used testing methods applied in functional examination of the vestibular organ, using nystagmography, reading and evaluation of the test results, particularly the nystagmogram, and correlation with audiometric and neurologic findings, final neurotological diagnosis, management and treatment. Patients will be tested by participants and the history, symptoms and test results will be discussed in informal conferences. Enrollment is limited to twelve. For application forms write to the Department of Otolaryngology, 1855 West Taylor Street, Chicago.

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## **Gastroenterology Course**

Third annual course in Gastroenterology will be presented by the Graduate Medical Education Department of the Alton Ochsner Medical Foundation with distinguished faculty of visiting professors, local area guests and the staff of the Ochsner Medical Center. Consideration is given this year to disease problems of the small bowel and colon with approach from the standpoint of newer developments in the pathophysiologic processes of these conditions.

Informality is the rule. Adequate time for exchange of ideas and problems and care examples enliven the curriculum. Inquiries concerning this course should be directed to: William H. McFarland, Administrator, Alton Ochsner Medical Foundation, Graduate Medical Education Department, 1514 Jefferson Highway, New Orleans, Louisiana 70121.

## **Pediatric Cardiology**

The Division of Pediatric Cardiology at the University of Miami will sponsor a symposium on "Controversial Issues in Pediatric Cardiology, 1973," to be held on Key Biscayne, March 19-22, 1973. Sessions will be devoted to the principles of management of the infant undergoing intracardiac surgery and will include discussions of pre-operative, operative and post-operative management; surgical results in specific lesions in infants, e.g., pulmonary atresia with intact ventricular septum, transposition, tetralogy and total anomalous pulmonary veins; palliative surgery—status 1973; and recent advances in electrophysiology.

## **Master Interpretation of Clinical Electrophysiology**

The University of Miami School of Medicine and the Council on Clinical Cardiology of the American Heart Association will present a postgraduate seminar entitled: "Master Interpretation of Clinical Electrophysiology" on May 29-31, 1973. The program will be held at the Contemporary Hotel at Disney World, Lake Buena Vista, Florida.

Tuition for the course is \$150.00 non-members; \$125.00 Fellows and members of the Council on Clinical Cardiology, and Physicians in training. Registration is limited to 150. Inquiries should be addressed to Dr. Louis Lemberg, University of Miami School of Medicine, P. O. Box 875, Biscayne Annex, Miami, Florida 33152.

## **American Board of Family Practice Sets Certification Exam Date**

The American Board of Family Practice will give its next written certification examination on October 20-21, 1973. It will be held in various centers geographically distributed throughout the United States. Information regarding the examination can be obtained by writing Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506.

It is necessary for each physician desiring to take

the examination to file a complete application with the Board office. Deadline for receipt of applications at the Board office is August 1, 1973.

## **National Congress On Medical Ethics**

The Fourth National Congress on Medical Ethics will be held April 26-28, 1973, Washington Hilton, Washington, D.C.

Among the subjects to be discussed will be: "What is Medical Ethics"; "How Does the Student or the Resident or the Nurse See Medical Ethics"; "The Teaching of Medical Ethics"; "Medical Ethics and the New Biology," etc.

## **American College of Surgeons Holds First Spring Meeting**

The American College of Surgeons announces its first annual four-day Spring Meeting, in New York, April 1-4, at the Americana and Hilton hotels. Eight structured postgraduate courses, some supplemented by plenary sessions and small workshop discussions comprise the program, which is planned to correlate with the Surgical Education and Self-Assessment Program (SESAP) of the College.

Purpose of this new annual meeting is to provide a well-rounded educational program based on the College's interpretation of need, the substantive data derived from SESAP, which 12,000 surgeons, including Fellows, non-Fellows and residents have now subscribed to. This now enables the College to plan a practical, direct answer to specific needs of the modern surgeon. New developments will be emphasized, information will be updated and some areas of wider interdisciplinary character will be introduced.

Fellows of the College will receive official registration and hotel forms. Non-Fellows may write to S. Frank Arado, American College of Surgeons, 55 East Erie, Chicago, Illinois 60611.

## **Forensic Scientists to Hold Annual Meeting In Las Vegas**

The American Academy of Forensic Sciences will hold its Twenty-fifth Annual Meeting at the Las Vegas-Hilton, Las Vegas, Nevada, February 20-23. The four-day event will also include the Fifth Annual Meeting of the National Association of Medical Examiners.

Two General Sessions, on Wednesday and Thursday mornings, will present respectively, an in-depth review of the twenty-five year progress of the forensic sciences and the subject of "Suicide." Some of the subjects of general interest to be discussed are: assaultive juveniles; computer-related crimes; the effects of methadone on driving ability; case histories of two skyjackers; the Clifford Irving Hoax; medico-sociological aspects of rape; the criminal confession; unexpected natural death in children; and child abuse and neglect by drug addicted mothers.

Further details, including an advance program and registration information, may be obtained from Dr. James T. Weston, 44 Medical Drive, Salt Lake City, Utah 84113.



Eye Clinic Gifts Needed

Deductible gift for eye clinic in southwest (Ometepc) Mexico in small Presbyterian hospital is needed. Office equipment, surgical equipment and Strontium-90 Beta Applicator also desirable. Contact: Jerre Minor Freeman, M.D., 188 So. Bellevue, Memphis, Tennessee 38104, tel. 901/726-1941.

American College of Emergency Physicians Symposium

The American College of Emergency Physicians will sponsor a two-day workshop February 7-8 at the International Hotel, Las Vegas, Nevada.

Advanced registration fee for members is \$110 and for non-members \$135. Details may be obtained from the American College, 241 East Saginaw, East Lansing, Michigan 48823.

Three Days of Cardiology

"Three Days of Cardiology for Physicians" will be held at Shreveport, Louisiana on March 1-3, 1973.

The meeting is co-sponsored by the Council of Clinical Cardiology of the American Heart Association, Louisiana State University Medical School—Shreveport, and the Louisiana Heart Association.

The theme of the meeting is "Cardiovascular Emergencies."

Family Medicine Review Scheduled at University of Kentucky Medical Center

The Third Annual Medicine Review will be held at the University of Kentucky Medical Center, February 11-17, 1973. Program chairman: Frank Lemon, M.D. Registration fee: \$175. 42 hours of AAFP credit has been requested. For further information contact Frank R. Lemon, M.D., Associate Dean for Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.

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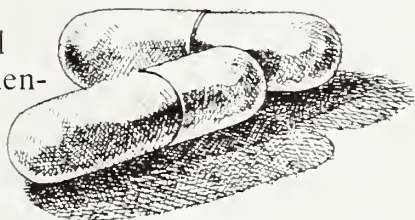




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**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

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in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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## DRUG DISCOVERY: The Pending Crisis

STEPHEN L. DE FELICE, M.D.\*

Though a significant historical event has occurred, it is passing by unnoticed. Drug discovery has virtually stopped. This crisis has occurred despite the fact that the special skills of the FDA, academia and the pharmaceutical industry are better than ever. Only a very small percentage of the few who are aware of the problem question the existence of this virtual cessation—they debate only its cause.

All analyses to date that have attempted to demonstrate this drug decline have been criticized on different points. But the more sophisticated analyses clearly illustrate this pattern of decline.

What is so surprising to me is not that drug discovery has declined—but that so few voices are raised to challenge that decline.

If one steps back and views the last three decades, a definite pattern emerges. The decade of the forties produced exciting new drugs such as the broad spectrum antibiotics, steroids, anticholinergics, antihistamines, etc. Though we've grown more sophisticated since then, these events were medical milestones.

Then came the golden era of the fifties, whose breakthroughs are numerous: the macrolides (medium spectrum antibiotics), neomycin, polymixin; chlorpromazine for the treatment of schizophrenia; semi-synthetic penicillins that combated the penicillin-resistant staphylococcus that plagued our hospitals; isoniazide for the treatment of tuberculosis; the first oral contraceptive; useful new minor tranquilizers; superior new antidepressants, the oral antidiabetic compounds, etc. The atmosphere of discovery was exhilarating.

Then something unexpected occurred. As we entered the decade of the sixties the availability of new drugs dramatically diminished. The excitement quickly abated, confidence lessened and for the first time pessimism pervaded our vigorous system of drug discovery. What could have possibly had such an acute negative effect

\*President, Clinical Resources, Inc., subsidiary of Medcom, Inc., New York.

on such a positive, productive movement?

"Certitude is for fools," wrote David Hume, and frequently no single event can unequivocally be singled out as the sole cause of a subsequent event, particularly when dealing with social phenomenon. And yet, two historic events do separate the golden era of discovery of the 50's from the wasteland of the 60's—the thalidomide tragedy and the Kefauver-Harris amendments. The spirit of the latter was certainly related to society's reaction to the former—that drugs should, above all, do no harm.

I submit that attempts at the implementation of this noble goal have played a significant role in the decline of new drugs. This needed attempt to control widespread use of untested drugs—this strengthening of proper FDA regulatory authority—was mistaken for a need for non-scientific controls in drug research.

Consumerism, paradoxically, has different effects in different areas. There is, for example, little doubt that the pressures brought upon the government forced the auto industry to make safer cars. The intent of these pressures, of course, is to reduce risk to the consumer.

Understandably, similar pressure is being applied to our drug discovery system in an effort to reduce risks with drugs. But human risk is an integral part of the drug discovery process. Any system, therefore, must be counterproductive if it attempts to reduce risk to the degree exemplified by one former government official's statement: "This country does not permit, at least not in the present day context, a needless surrender of one life. This is the ethic that is professed." Were this the proper philosophy, and we were today developing penicillin, one death resulting from that research might end the study, and penicillin would go undiscovered.

Since the Kefauver-Harris amendments and thalidomide, a situation has developed where any bad drug event (adverse effect)—be it isolated or occurring in animals only—is magnified to such a degree that severe prohibition of clinical investigation has occurred. This has occurred not only because of regulatory pressures but also because consumer pressure is now so prevalent that an *anticlinical research mentality has arisen in the medical community itself*.

Not too infrequently, one hears the ad hominum argument, "Would you let your father take this drug?" This attitude is disturbing, since the drugs can only be discovered in man.



Animals have limited predictability regarding the clinical efficacy of drugs. Many of our great drugs such as chlorpromazine and dapsone (used in the treatment of malaria) were discovered serendipitously in man. Since thalidomide, however, opinion has turned against early and imaginative testing of drugs in man. Now, drug researchers must prove safety and activity in animals—frequently unachievable—before taking a drug to man.

If nothing else, this book explodes the myths about testing drugs in animals. It demonstrates that the predictability of biological events from animals to man—either good or bad—is not very high. Even if some bad events are predictable, the book shows why they should not hinder the evaluation of a drug in man. Well-controlled studies, even with the most toxic of substances, can be done very safely. Drug tragedies occur with marketed products that are widely used, and yet occur very uncommonly during the investigational phases. Consumerism, therefore, should concern itself with *marketed* products.

Will increased clinical experimentation increase societal risk? Probably the best answer can be found in the pages of history. Consider the drugs that were introduced over the past thirty years—who among us would cast aside these drugs? Little would remain in our medical armamentarium. The overall societal risk-benefit ratio clearly favors the benefit aspect of the equation. To be sure the great philosophic question of the general good versus the particular good is key to any position. Philosophers have attempted mightily to reconcile both goods—and have failed. Societies, however, do not have these problems and reconcile both issues with facility. For example, penicillin kills many people but saves many, many more. The society has accepted penicillin. The risk-benefit ratio during this era was not questioned by our society simply because there was a general confidence in our drug discovery system. The forces of this present day consumerism were not present and government influence was minimal to moderate. Former NIH head Shannon, stated that the golden era of drug discovery occurred during a *laissez faire* policy of government. Only when government influence increased did drug discovery lose its vigor.

It appears, therefore, that an almost impossible situation exists. There is a consumeristic movement that in many ways is a good thing and is not about to disappear. There is also the reality that drug discovery can only be increased by more frequent and imaginative clinical research which on the surface appears contrary to the consumeristic spirit. Can these two factors be reconciled?

In this book, I show how this can be done. Generally speaking, the proposed objectives are twofold; to insulate unnecessary forces of consumerism from the drug discovery process and to create a new medical specialty, clinical drug development whose function would be to guide worthwhile drugs through the complex maze of societal obstacles. Specifically, the proposals would be as follows:

- a. Establish residencies of clinical drug development with academic, industry and government participation.
- b. Remove early, imaginative clinical research from the governmental regulatory process. Government regulatory agencies are representatives of the consumer and, therefore, bear the brunt of such pressure. When a drug becomes “marketable” only then should it fully come under the regulatory processes.
- c. Create regional peer groups to which clinical protocols are submitted and review. These peer groups must contain sufficient broad knowledge to make a sound judgment. In this way, one can bring the necessary expertise to bear upon the critical areas of drug discovery.
- d. And finally, to institute a no-fault type of insurance for clinical investigators. The latter aspect is critical.

Unfortunately, in order for the above to occur, strong Congressional support is mandatory. This will not come about unless there is sufficient support by the media.

If drug discovery does not rightly come under the control of the scientific community, and is not removed from undue forces of consumerism, then there is little doubt that new important drugs will not be forthcoming. If that happens, then the first prerequisite to better health care for the people will have been ignored.

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**WARNINGS:** Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

**Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

**Usage in newborns, infants, and children.** (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

**PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

**ADVERSE REACTIONS:** **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.

**Skin:** maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

**Renal toxicity:** rise in BUN, apparently dose related (See **WARNINGS**).

**Hypersensitivity:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

**Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**USUAL DOSAGE: Adults**—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

**Children**—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

**Concomitant therapy:** Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

**SUPPLIED:** 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

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## ANSWERS TO "THE COOPER QUIZ"

THE JOURNAL OF THE  
AMERICAN MEDICAL ASSOCIATION

July 1972

1. TRUE. "Our findings support the usefulness of the CEA assay in patients with colonic cancer. Preoperatively, an undetectable serum CEA suggests that the tumor is localized and therefore amenable to curative resection. Conversely, a strongly positive result for serum CEA determination suggests metastatic disease and implies reduced likelihood of surgical cure.  
"When the clinical circumstances are compatible with the diagnosis of colonic cancer, patients with borderline CEA values should be closely watched. This may result in detection of tumor at a relatively early stage." (July 3, pg. 35.)
2. FALSE. "Follow-up studies in our patients, though necessarily short, have provided useful information. Contrary to the conclusion of LoGerfo et al, a negative CEA test result following presumed definitive resection did not ensure eradication of disease. Tumor recurrence became obvious in several patients during the course of the present study, despite negative postoperative CEA test results. In view of the low incidence of CEA positivity in patients with localized tumors, it is not unexpected that small foci of residual tumor may escape detection by this test. Repeated follow-up CEA determinations often detect antigenemia as the residual tumor grows." (July 3, pg. 35.)
3. TRUE. "In a classic paper published in 1952, Altmann et al first drew attention to a series of patients with carcinoma of the larynx in whom the malignant changes were largely limited to the mucosa. Carcinoma in situ or intraepithelial carcinoma of the larynx and pharynx is now widely recognized, and with few minor variations there is general agreement as to the histologic requirements for the diagnosis. These requirements have been spelled out best for lesions of the uterine cervix, we employ them for laryngopharyngeal lesions essentially without change. The characteristics include replacement of the full thickness of the epithelium by cells with the cytologic characteristics of malignancy, a lack of maturation or differentiation, and an absence of invasion." (July 3, pg. 72.)
4. (A) "Candidiasis has been associated with several different endocrinopathies. Of these, hypoparathyroidism has been the most frequent. Less frequently, Addison's disease, ovarian insufficiency and thyroid abnormalities have also been observed. "This is a case report of a patient in whom chronic mucocutaneous candidiasis developed long before a diagnosis of marked hypothyroidism could be made. Normalization of his thyroid status by replacement therapy resulted in dramatic spontaneous improvement of the candidal infection which had previously been resistant to a variety of anti-candidal treatments." (July 10, pg. 156).
5. FALSE. "Fifty-three patients with permanently implanted pacemakers, predominantly of the triggered unipolar variety, were exposed to the active electromagnetic field of a weapons detector. Standard unipolar and bipolar ventricular pacers were unaffected. Certain sensitive unipolar atrial and atrioventricular pacers showed minor temporary rate changes that were clinically insignificant. We believe that the weapons detector can be safely employed with patients who have any of the pacemakers tested." (July 10, pg. 162, "Abstract")
6. FALSE. "During the past five years, the use of combinations of drugs in cancer chemotherapy has become increasingly popular, and remission rates in some types of solid tumors have been described as being higher than rates with single agents used alone. Such tumors include cancer of the testis, breast carcinoma, and acute leukemia. In 1964, a combination of agents was devised at the National Cancer Institute for the therapy of Hodgkin's disease. This combination (MOPP) included mechlorethamine, vincristine sulfate, procarbazine, and prednisone, and results of the use of this combination have been reported by DeVita et al and by Lowenbraun et al. These preliminary results, reported in 1970, were extremely encouraging. The remission rate was superior to that previously reported for single drugs, and even more important, a substantial proportion of patients remained continuously free of disease for four years even though no maintenance therapy was given. On the basis of past experience with single agents, with remissions usually lasting significantly less than four years, the treatment of choice for advanced Hodgkin's disease (stages III and IV) is probably the four-drug MOPP combination, given as described by DeVita et al. This consists of six two-week cycles of chemotherapy, with two weeks between each period of drug administration." (July 10, pg. 261.)  
Ed. Note: This paper describes giving combination chemotherapy to ambulatory patients in private practice.
7. ERYTHROMYCIN. "The clinical ineffectiveness of ampicillin in eradicating B pertussis as shown in this study has been demonstrated by others. Following the appearance of these reports, subsequent patients were treated with erythromycin. To date, a total of seven adults have been treated with erythromycin for presumptive pertussis. In all cases the follow-up FA smears five days after onset of therapy have been negative. As noted by others, if the cough has progressed to the paroxysmal stage prior to the onset of therapy, antibiotics do not appear to alter the clinical symptoms." (July 17, pg. 267.)
8. TRUE. "Although extensively studied, no consistent abnormality of the plasma coagulation system has correlated with the bleeding diathesis observed in patients with myeloproliferative disorders. Instead, the present studies suggest that defective platelet function is universally found in these patients, and



that the replacement of the abnormal platelets with normal ones may be therapeutically beneficial in dealing with hemorrhagic episodes.

"Although abnormalities in platelet appearance have been well described in myeloproliferative disorders, attempts to measure platelet function have, until recently, been unsatisfactory.

"The more recent development of techniques that evaluate platelet aggregation has significantly improved the evaluation of platelet function. These techniques allow reproducible and at least semi-quantitative assessment of platelet physiology. It is significant that this reliably measurable function was found to be abnormal in virtually all the patients studied herein, with the most common abnormality being failure to respond with normal aggregation to epinephrine and levarterenol hydrochloride." (July 17, pg. 273.)

9. FALSE. "Metastatic choriocarcinoma of the brain is a curable lesion. Success requires first a high index of suspicion that the patient may have a choriocarcinoma. These tumors develop in women of childbearing age and commonly produce signs and symptoms of subarachnoid hemorrhage, intracerebral hemorrhage, or brain tumor. Diagnosis can be established by radioactive scan of the brain, x-ray examinations of the chest, and bio-assay of the patient's urine and cerebrospinal fluid for chorionic gonadotropin. Cure is obtained by extirpation of the tumor, triple chemotherapy, and irradiation of the site of the cerebral metastasis. This communication reports three cases of metastatic choriocarcinoma of the brain in women who have been successfully treated, and one unsuccessful case in a man with metastatic testicular choriocarcinoma." (July 17, pg. 276, "Abstract")
10. TRUE. "The physiologic factors, cause, and therapy of lactic acidosis have recently been reviewed in a comprehensive paper by Oliva. He concluded that severe anemia was probably not a clinical cause of lactic acidosis. In Huckabee's original publication, it was found that lactate concentration was abnormal in five patients with severe anemias of various causes. Seibert and Ebaugh in a later study demonstrated significant excess lactate production in chronically anemic patients with hemoglobin values below 6 gm/100 ml.  
"The patient described by Coronato and Cohen had become symptomatic, manifesting progressive tachypnea and stupor, over a 12-hour period. She was subsequently found to have a severe anemia (Hemoglobin value, 4.8 gm/100 ml), and elevated lactate levels. Improvement occurred within three hours after beginning a transfusion of packed RBC's. At the end of eight hours the patient's symptoms had abated and the serum lactate level was normal. Further studies confirmed the diagnosis of pernicious anemia.  
"Our patient was first seen in a state of severe metabolic acidosis. The unmeasured anion of the serum obtained on admission was accounted for primarily by the elevated lactate concentration. A smaller quantity remained unidentified after an
- extensive laboratory evaluation. The initial pH of less than 6.8 is the lowest value we have recorded in a surviving patient.  
"Our patient, like that of Coronato and Cohen, began to respond shortly after receiving a blood transfusion. Thereafter, progressive improvement was observed in both the arterial pH and the patient's clinical findings. Within 12 hours, her vital signs were stable, she was alert, and the acidosis had subsided." (July 17, pg. 293.)
11. FALSE. "Previous investigations have shown a significant relationship between obesity and hypertension. The data presented here indicate that this represents a relationship between obesity and EH only; no such relationship appears to exist between obesity and RVH. Patients with hypertension due to renal artery stenosis of any etiology are closer, on the average, to their actuarially desirable weight than are patients with essential hypertension." (July 24, pg. 381.)
12. (A) a. "Since penicillin G was first instituted as therapy for the treatment of early syphilis, there has been no detectable change in efficacy.  
b. Tetracycline in a 30-gm dose given in a ten-day period compared favorably with other recommended penicillin schedules.  
c. The base form of erythromycin when administered in a dose of no less than 30 gm (Minimum of 400 mg/kg of body weight) in a period of ten days is an acceptable alternative for penicillin in the treatment of early syphilis." (July 31, pg. 476.)  
Ed. Note: It was interesting to us that 250 mg. of erythromycin estolate gives the same blood concentration as 1000 mg of erythromycin base. The reason it is not used is the fact that it can produce a cholestatic hepatitis.
13. FALSE. "The herpes-type (HTV) or Epstein-Barr virus (EBV) was first discovered in a cell culture from a patient with Burkitt's lymphoma. Seroepidemiologic studies have shown antibody to antigens associated with EBV infection to be common in normal individuals as well as patients with various diseases. The virus has been implicated as etiologic in benign and malignant lymphoproliferative diseases, including infectious mononucleosis and Burkitt's lymphoma. High antibody levels have also been associated with an increasing number of diseases having disordered lymphoid function, which include chronic lymphocytic leukemia, Hodgkin's disease, and sarcoidosis. The virus appears to result in a latent infection of lymphocytes and possibly other cells." (pg. 23.)
14. FALSE. "It is clear that the antibody activity against EBV antigens in any of the groups studied is not comparable to that shown in other diseases with lymphoid dysfunction such as chronic lymphocytic leukemia, Hodgkin's disease, infectious mononucleosis, or sarcoidosis; and there is insufficient evidence to implicate this virus as etiologic in any of the 'collagen vascular' or 'connective tissue' diseases studied." (pg. 27.)



15. TRUE. "The present limited investigations in digitalis intoxication show frequent persistence of electrocardiographic evidence of intoxication following decline of levels in the blood to concentrations which, in the steady state, would be considered normal maintenance levels." (pg. 36.)
16. TRUE. "Death during an asthmatic attack may be due to a variety of causes and may take place without premonitory signs. Regardless of the immediate cause of death, the pathological findings of extensive plugging of airways, especially bronchioles, with tenacious mucus, edema of bronchial walls, and infiltration of bronchial walls by eosinophils are almost invariably present. Efficacy of treatment is difficult to assess because of the lack of a uniform system of grading the severity of attacks. . . . Most authors state that the deaths reported occurred early in their series before treatment principles were established. Sudden death while the patient was unattended is widely reported. The use of cardiogenic bronchodilator drugs during this hypoxic state can result in cardiac arrhythmias. Paradoxical reactions from the use of these drugs result in increased airway resistance. The association of the use of sedative drugs with death in status asthmaticus was observed as long ago as 1943." (pg. 40.)
17. FALSE. "Despite improvement in airway obstruction in patients with bronchitis and asthma, many observers have reported a fall in  $\text{PaO}_2$  following the nebulization of isoproterenol and other bronchial dilators. In this study we have also observed beneficial effects of bronchial dilators on airway obstruction. However, the insignificant fall in  $\text{PaO}_2$  as well as  $\text{PaCO}_2$  occurs following nebulization of both the inert material and isoproterenol. Further, the fall in  $\text{PaO}_2$  and  $\text{PaCO}_2$  is followed by a return to prenebulization levels by 30 minutes. Since the maximal improvement in airway resistance persists for 30 minutes, it is unlikely that the slight postnebulization fall in blood gases is of any significance." (pg. 46).
18. FALSE. "Certain points concerning the bone pain of multiple myeloma can be made as a result of this study. (1) The severe back pain, which occurs in 65% to 75% of patients does not appear to be related to old vertebral collapse per se. . . . (2) Bone pain does not appear to be related to the presence of 'punched out' foci of osteolysis or of demineralization (i.e., to 'tumor pressure'). . . . (3) Moderate and severe bone pain was invariably accompanied by abnormal strontium uptake, and the scintigraphic findings preceded roentgenographic changes by three to ten (or more) months."
19. TRUE. "Radiation therapy is known to afford excellent palliation in this disease, and the strontium scan is of considerable aid to the therapist in setting treatment portals. Two of our patients received a total of four courses of radiation therapy to scan-positive, painful areas with a moderate to excellent response, although roentgenograms were abnormal in only two of the four areas treated. Thus, it would appear to be desirable to obtain bone scans in symptomatic patients in order to provide symptomatic relief by means of radiation therapy and, hopefully, to prevent vertebral collapse or pathologic fracture, as well as to alleviate pain." (pgs. 57-58.)
20. TRUE. "Sepsis caused by multiple-organisms was encountered in drug-users, patients with leukemia on chemotherapy, and in a neonate and amnionitis. Otherwise, blood cultures containing more than one organism were indicative of contamination." (pg. 87.)
21. FALSE. "In an attempt to standardize conditions for quantitating proteinuria, we examined the effect of water loading and intravenous administration of furosemide on protein excretion in man. Urine volume, protein excretion, and creatinine clearance increased in both studies, and there was significant correlation between percentage changes in protein excretion and creatinine clearance. We recommend that protein excretion rate should be determined during short periods under standard conditions of posture, hydration, and ideally, without interference by drugs." (pg. 90.)
22. FALSE. "Our microbiological results confirm the findings of others that gram-negative organisms are predominant in nosocomial infections and that antibiotic treatment or instrumentation, or both, results in an increased number of gram-negative organisms, as well as in infections due to a greater variety of species than found in community-acquired infection.  
"As Schneerson has previously reported, there is a high percentage of strains resistant to ampicillin and tetracycline and a very small percentage of resistant strains with gentamicin among gram-negative organisms.  
"Also, as shown elsewhere, we found that the percentage of medium resistant or highly resistant strains is higher in the nosocomial as compared to the community-acquired strains. However, more than half of all the strains isolated in both groups are sensitive to most of the drugs used in anti-infectious therapy." (pg. 109.)
23. (A) "Although three basic, reasonably good means of treatment for Graves' disease with hyperthyroidism are available, considerable differences of opinion about the indications for each continue to exist. Radioactive iodine has steadily gained popularity in the last two decades in view of its convenience and effectiveness, but surgery is still widely used particularly in younger patients. Antithyroid drugs are often used only as a first therapeutic phase, before a 'definitive' mode of treatment is utilized. However, it has been shown that over 50% of patients treated with antithyroid drugs undergo a permanent remission and do not seem to develop permanent hypothyroidism. On the other hand, 40% to 70% of patients treated with surgery or radioactive iodine develop hypo-

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thyroidism if a ten-year follow-up period is utilized.

"Infiltrative exophthalmos, a serious complication of Graves' disease, rarely improves and may have its onset after otherwise successful treatment of hyperthyroidism. Subtotal thyroidectomy, antithyroid drugs, external irradiation of the thyroid, and radioactive iodine all have been incriminated as the cause of the ophthalmopathy or its deterioration appearing after treatment. However, several series of patients with Graves' disease which were treated with antithyroid drugs alone did not reveal any case of severe deterioration of the ophthalmopathy. Beierwaltes also found that progression of ophthalmopathy after treatment with antithyroid drugs was less frequent, or less marked when present, than after treatment by surgical means or with radiation. More recently, Astwood reported informally, as a clinical impression, that progression of ophthalmopathy is rare when antithyroid drugs are used to treat Graves' disease. A retrospective study done by the same author showed that none of the patients treated with thyroid blocking drugs required surgical operations on the eyes. However, these data have not yet been formally published. Aranow and Day arrived at a similar conclusion when comparing their series treated with antithyroid drugs with other series in the literature where radioactive iodine was used." (pg. 111.)

24. TRUE. "Although expert opinion on leukemia has moved in the direction of a hazard-defense-system theory of etiology, the public-health implications of this type of theory have not been very widely recognized. Thus, the traditional single-factor theory of leukemogenesis is commonly used in setting "safe" levels for exposure to low-level radiation. However, if, as in the simplest hazard-defense-system theories, there is a "susceptible" subgroup in the general population, the assumption of a homogeneous population at risk that is implicit in single-factor theories is a dangerous one. For "safe" levels to accomplish their purpose, they must be set to protect the "susceptible" members of the general population, who may be vulnerable to dosage levels that may be orders of magnitude lower than those that are hazardous to "nonsusceptible" subjects. Since the "nonsusceptible" group constitutes the vast majority of the population, an assumption of homogeneity tends to lead to levels that are safe for most persons but fail to protect the "susceptible" ones.

"The hypothesis that there is a "susceptible" subgroup in the general population has been supported by indirect factual evidence and theoretic arguments, but it is not easy to develop a clear-cut scientific demonstration of the existence of "susceptible" subjects. Such a demonstration requires the identification of "susceptible" persons on a probability basis. In childhood leukemia a number of items of information have been suggested as relevant to this identification. Most of these are items in the medical history of the leukemic

child or of its mother. However, a formal, objective test of the "susceptible" hypothesis requires extensive information on medical history and exposure to potential hazards on a large series of cases of leukemia and of controls representative of the general population. Lengthy and expensive statistical processing is required to put these data in a form suitable for a valid test of the hypothesis. Large-scale surveys in England and the United States have confirmed the relevance of some of the suggested indicators of 'susceptibility.'" (pg. 107.)

25. FALSE. "We have thus presented data that in 31 patients who had an ileostomy and colectomy for Crohn's disease of the colon clinically important, x-ray-evident, and (in 21 whose tissues were reviewed) pathologically confirmed recurrent granulomatous disease of the small bowel developed. "Our experience is thus in striking contrast to that of the group from the Beth Israel Hospital of Boston, who 'have been unable to find a single patient with either granulomatous or ulcerative colitis who has had inexorable, progressively more proximal spread of disease and nutritional impairment, as so often happens in postoperative regional enteritis.' Since ileostomy and colectomy are considered curative of ulcerative colitis, although 'ileostomy dysfunction' may require revision on occasion, the distinction between these clinical entities should be sharply drawn, and their different therapeutic implications recognized. "The figure of 46 per cent recurrence after ileostomy approximates that expected for recurrent ileitis proximal to anastomosis after ileocolostomy during a similar follow-up period. Thus, it must be recognized that Crohn's disease of the colon can recur in the small bowel, with all its classic and debilitating features, after ileostomy and extirpation of the colonic disease." (pg. 114.)
26. FALSE. "Transient neonatal diabetes is a self-limiting condition beginning in the immediate newborn period and lasting for three to four months. It is usually seen in infants who are small for gestational age and is characterized by severe dehydration, glycosuria and hyperglycemia in the absence of ketonemia. Insulin therapy is usually essential to keep the blood sugar at normal levels. Insulin is known to be present in the fetal pancreas as early as 8 to 10 weeks of gestation. However, release of insulin from fetal pancreas in response to glucose and tolbutamide is poor. At term, release of insulin occurs in response to hyperglycemia, glucagon, and amino acids, but not to tolbutamide. The factors responsible for maturation of insulin-releasing mechanisms are not known." (pg. 121.)
27. TRUE. "The increased susceptibility of patients with SS disease to infection may be related to an immune deficiency state. "Although the mechanism of increased severity of mycoplasmal infection in patients with SS disease is not obvious, this observation may have im-



portant therapeutic implications. In such cases, pulmonary illness characterized by fever, infiltrates, and leukocytosis represents a relatively common pediatric or medical problem. Although the primacy of pneumococcal infection in these situations cannot be challenged, the possibility of other infecting agents such as *M. pneumoniae* must be considered, even in the presence of pleural effusion and pleuritic pain.

28. TRUE. "The prevalence of CMV in the milk of normal women is relevant to the renewed interest in the role of viruses in mammary cancer, and should be remembered in studies concerned with the detection of viruses or antigens in human milk. The possibility of a genuine association of CMV with breast cancer should not be dismissed without investigation, since other members of the herpes group are known to be associated with tumors in animals and man." (pg. 178.)
29. TRUE. "The curative role of radiotherapy in the treatment of localized Hodgkin's disease has been amply demonstrated. Although extended-field and total-lymphoid radiation have greatly improved disease-free survival, initial disease settings that include systemic symptoms and disease above and below the diaphragm are associated with significant recurrence rates. The tumoricidal dose level of radiotherapy necessary to eradicate, totally a focus of Hodgkin's disease is known. Since all sites of known Hodgkin's disease are treated with such doses of radiotherapy, it is reasonable to assume that occult microscopic foci of disease outside of treatment fields are responsible for most relapses after total-lymphoid radiation." (pg. 1.)
30. FALSE. "During the period of our study (August 1968 to November 1971) disease-free actuarial survival was demonstrated to be superior in the group receiving sequential radiotherapy and chemotherapy. These results are encouraging but must be viewed with caution. As shown in Figure 4, actual survival for the two groups is not yet significantly different. Thus, the ability of combination therapy to cure or to prolong significantly the lives of more patients with Hodgkin's disease than radiotherapy alone has not been demonstrated. It is possible that all that has been accomplished by giving MOPP therapy after radiotherapy is to delay the appearance of relapses by administering continued suppressive therapy for 6 to 8 months.

The fact that disease-free survival was significantly different, even when calculated from the end of all therapy, diminishes the likelihood of this possibility. An alternative possibility that is far from excluded is that the salvage rate among patients who relapse after radiotherapy alone and are then treated with MOPP may be high enough to offset the apparent initial superiority of the sequential therapy with respect to long-term survival.

"For the present, we consider it still premature to recommend the general use of total-lymphoid radiotherapy plus combination chemotherapy in patient with Hodgkin's disease." (pgs. 8 & 9.)

EDITOR'S NOTE: MOPP is the code for combination chemotherapy. It indicates nitrogen mustard, vincristine, procarbazine and prednisone were used.

31. (A). "Deep-seated fungal infections may respond favorably to treatment with currently available drugs, yet there is need to expand the armamentarium. Amphotericin B, the principal drug now in use, produces adverse effects, such as fever, thrombophlebitis, and renal toxicity, that limit its effective use." (pg. 43, col. 1.)
32. (B). "The antimicrobial drug, 5-fluorocytosine, was successfully used in systemic infections caused by *Cryptococcus neoformans*, species of *Candida*, *Torulopsis glabrata*, and *Aspergillus fumigatus*, as well as in deep skin infections caused by *Phialophora species*. It inhibited disseminated sporotrichosis. Cryptococcal disease showed the greatest variability in response to treatment, with relapse being common after an initial period of clinical improvement. Candidal endocarditis probably should not be treated with this drug alone.  
"The drug interferes with nucleic acid metabolism in various fungal species. As with antineoplastic agents, fungal cells that have incorporated 5-fluorocytosine may not die immediately. Mammalian cells apparently do not metabolize the drug.  
"Conveniently, the drug can be administered orally to outpatients, is relatively nontoxic compared to amphotericin B, and can be given in full therapeutic dose when beginning treatment. It does not replace amphotericin B; rather, it expands the armamentarium for treatment of systemic fungus diseases. Simultaneous use of both drugs may be indicated in some patients." (pg. 48.)



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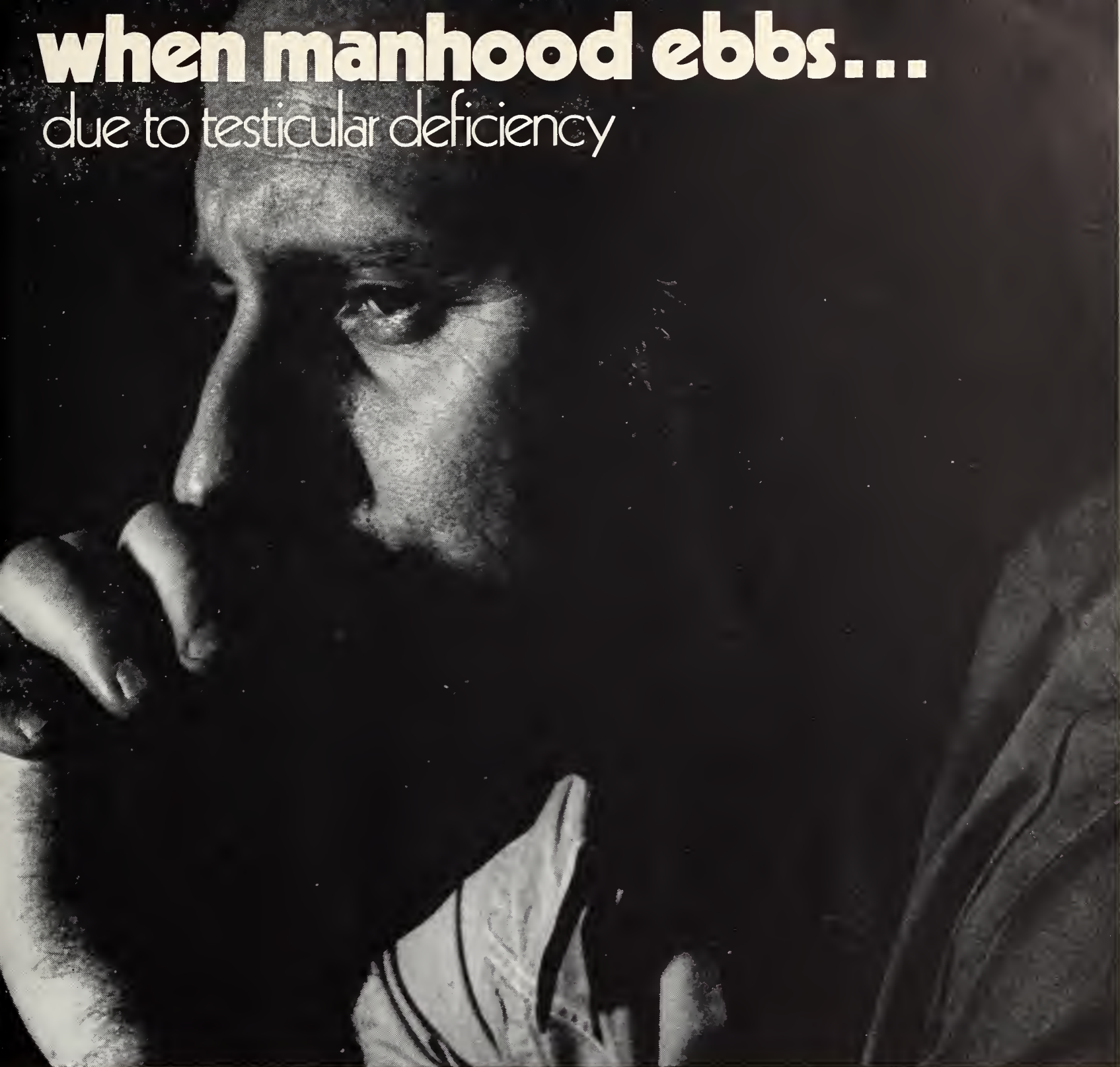
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Manuscripts must be typewritten on one side of letterweight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer. The pages should be numbered and clipped or stapled together, but they should not be placed in a binder.

Bibliographic references should not exceed twenty in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, FG: What is Known About it, J. Tennessee M. A., 35:132, 1950.

Illustrations should be numbered and identified with the author's name. The editor will determine the number, if any, of illustrations to be used with the Journal assuming the cost of engravings and cuts up to \$25. Engraving cost for illustrations in excess of \$25 will be billed to the author. They will not be returned unless specifically requested.

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## *The Responsibilities Of a Surgeon* \*

HORACE T. LAVELY, JR., M.D.

In the years in which I have been a member of this society, I have heard many outstanding presidential addresses. They have covered most aspects of medical history and surgical philosophy. As I reflected on the choice of a topic for this occasion, it seemed that there was little that I could express which had not already been said. Nevertheless, I thought I would share with you this evening some of my thoughts on the responsibilities of a surgeon, and examine with you some of the reasons why this is such a trying, yet rewarding, profession. In order to do this, we must have some understanding of what constitutes a surgeon. How does he come about? What are his characteristics, attributes, deficiencies, and goals? He does not, like the goddess Athena, spring full grown from his father's forehead.

No other profession has more romantic attraction than the practice of surgery. Movies, and particularly television, have done much to glamorize it. The high point of many a drama is played out under the glare of the operating room lights. Yet, with all its excitement and glamor, surgery is the most demanding of all the medical specialties, the most highly restrictive, and in many ways, the most difficult to achieve.

Dr. W. D. Haggard, one of Nashville's pioneer surgeons, called surgery the Queen of the Arts, and described it as the skilled use of the hands at the behest of the brain, applied to wound and disease in a service such as the angels. If this is true, how can the practitioners of this art be less than regal? On the other side of the coin, a current author has described

the surgeon as basically a cold man, contemptuous of people in medicine outside his specialty, and jealous of those within it. Hopefully, Dr. Haggard's model is nearer to the truth, but a closer examination may tell us why this latter viewpoint is prevalent, and what we can do to ameliorate it.

At the risk of sounding immodest, I feel that surgeons do possess certain characteristics and traits which set them apart. Certainly they are unique in many ways: the type of work which they do, the kind of training they require, the time, money, and labor invested in preparing themselves, and the variety of activities in which they may be involved.

What sort of individual then are we likely to see migrating to this demanding specialty? It goes without saying that he must be intelligent. No one can absorb the amount of material needed, apply the proper reasoning, make the necessary decisions, sustain the incidental interpersonal relationships and carry the tasks to their conclusion without this trait.

A surgeon must be aggressive. Frequently he is faced with a situation in which procrastination may be dangerous, even fatal. He must then with all available information take some decisive action. He cannot, like some of his medical confreres, order another battery of tests and await developments. He must take the bull by the horns and make irrevocable decisions. This necessarily means that he must have a little of the riverboat gambler's instincts, and, like the gambler, to survive, he must be right.

Still, this intelligence and decisiveness must be tempered by conscience, which, while not listed first, has been called the first great requirement of the surgeon. Furthermore, judgment goes hand in hand with conscience, and while it is difficult to acquire, it is imperative that it be exercised.

It has been said that good judgment is acquired by experience, and that experience is acquired by poor judgment. However facetious this observation, it does contain a germ of truth,

\* Presidential Address, Nashville Surgical Society, November 10, 1972.



and it emphasizes the fact that nothing is more important to the complete surgeon than the exercise of judgment, and however he acquires it, this is what he stands or falls on.

By definition a surgeon is one who works with his hands or with instruments in the treatment of disease or deformity. While his work may vary greatly, depending upon the particular surgical specialty he has chosen, still this approach to the treatment of disease sets him apart from the rest of the practitioners of medicine.

His education is lengthy and arduous, usually consuming 13 to 17 years of preparation, and even at the completion of this prescribed period of education and training he can never cease to be a student. Whether it is the dog laboratory, the autopsy room, specialty group meetings, reading medical literature, or in conversation with his colleagues, he constantly seeks to enlarge and improve his knowledge as, indeed, he must, since without continuing education for 10 years, a physician will find himself with only 25% of his knowledge up to date, for it has been estimated that the life of medical knowledge is only 5 years. In a field in which changes are as rapid and advances so common as surgery, even this estimate may be too conservative.

What then must this intelligent, educated, decisive, conscientious individual do in the pursuit of his chosen specialty to discharge his responsibility? Indeed, what are his responsibilities? There are many responsibilities inherent in being a doctor. While obviously there is overlapping in many areas, for the sake of discussion we can consider his responsibility to his patients, to his profession and to himself. Many of these are enlarged or enhanced in a special way by the practice of surgery.

A surgeon's primary responsibility is to his patients. This relationship is the basic one in the medical system which has evolved in this country, and while from time to time we may be guilty of practices which undermine it, we should strive to maintain and even improve this relationship.

It is, of course, imperative that the surgeon bring to bear all of his talents in the treatment of each patient. He must exercise such skill and judgment that there can be no doubt that the correct course of management has been carried out. This responsibility in itself is an awesome one which is implied in his contact with each and every patient.

In no other field of human endeavor is this insistence on perfection manifested to such a degree. Each individual physician is expected to perform 100% of the time with such degree of exactitude that no error in judgment or technique will occur. While we all know this is far beyond any human capacity, still this expectation implied in the relationship with each patient is like the sword of Damocles hanging over him. This burden of infallibility which he carries is greater for the surgeon, for while his actions may be more bold and dramatic in his attempts to restore life and limb, still if something goes awry it is more obvious.

A surgeon must constantly decide whether a given problem falls within the scope of his training and experience, and if not he must be certain that such training, experience, and skill are brought to bear on that patient.

There is one area of doctor-patient relationships where physicians in general are probably deficient. This is in the area of communication. This is particularly unfortunate in the case of surgeons because of the character of the procedures which are performed and the consequences resulting from them.

In my experience this failure to communicate with the patient and his family is the major complaint which patients and hospital personnel have about surgeons. It is also a major cause of psychological trauma which may be quite disruptive, and is probably a significant factor in the institution of legal proceedings.

There is really no excuse for this shortcoming. We all know that no matter how well planned or executed, some procedures are fraught with unfortunate complications and we accept this as a calculated risk. Compared with the complexity of the procedures which we must perform it is a simple matter to sit down and talk with a patient and his family about his condition, what it is, what we are planning to do about it, and what he can expect as a result of this treatment. This responsibility for communication is particularly important postoperatively. I believe that any surgeon who operates on a patient has the obligation to meet face to face with the patient's family, allay their anxiety, and give them a reasonable idea of what was found, what was done, and what to expect. The excuse that we are too busy is simply not valid. If we are too busy for this essential part of a patient's management, we should not be doing it at all. Let's remember that patients—and their families



—are people too, and as Ralph Waldo Emerson said: "Life is not so short but that there is always time enough for courtesy."

Furthermore, in talking with a patient or his family we must be certain that we use language which he can understand. While the public is much more medically aware than it once was, they still do not understand a good many of the technical terms which we use, and it is our obligation to talk in terms which they understand.

Let us turn now to the surgeon's responsibility to his profession. First and foremost he is charged with the obligation of sharing his knowledge with others. This duty is as old as medicine itself and is spelled out in the Hippocratic Oath.

This willingness to teach and share information is one of the qualities which sets medicine apart from other businesses and professions. These are no patents, no secret formulas under lock and key, no new models. Everything is out in the open for anyone who is willing to learn. Here too, the surgeon by the nature of his activities is in a position to teach at every turn. In the examining room, in the operating room, or when making rounds, no patient is so routine, no procedure so simple, that something cannot be learned from it if we will just take the time and the trouble to do it.

One of the main criticisms which is leveled at the medical profession is that they close ranks and protect each other, even when they are at fault. While in an abstract sense this trait may be admirable, and, in fact, its application may be exaggerated, still we do have a responsibility in this area which is probably too often ignored. Let's face it, we are all human beings and whether we are doctors, lawyers, college professors, or business men there will be a few bad apples in the barrel. It is our responsibility to weed them out. Again, because of the nature of surgery and its potential for benefit by correct application, we also have the tremendous potential for harm if incorrectly practiced.

This responsibility for self policing, which also involves peer review and continuing education, is a delicate one. Nevertheless it is more and more in the forefront and we must discharge this responsibility ourselves if we are to

maintain the independence which we cherish.

We live today in a changing world with changing moral values, changing social philosophy, and accelerated technological advances. As a result of these changes, we, as physicians, are faced with new problems which require new solutions: threats of legal liability, decisions as to when death occurs, medical care for the poor and disfranchised, management of catastrophic illness, health care delivery—these and countless others constantly call for revisions in our traditional approach to medical problems. While many of these problems are of an ethical nature and must be resolved on an individual basis, many involve the medical profession as a whole and can best be handled by our duly elected representatives.

From time to time I hear some of my colleagues making disparaging remarks about the Nashville Academy of Medicine, the TMA or the AMA. This is like cutting off your nose to spite your face. Let's face it, we are the NAM, TMA and AMA, and if they do not reflect our wishes and best interests it is our responsibility to get involved and do something constructive about it.

Finally, a surgeon has a responsibility to himself. I think it was Polonius who said: "To thine own self be true and it follows as the night the day thou canst not then be false to any man." A surgeon must be certain that he acquires the necessary knowledge and skill to carry out the procedures he embarks on. He must maintain this knowledge and skill at a high level. He must be constantly alert to the ethical implications of his actions.

Lastly he must develop and maintain a frame of mind which allows him to survive psychologically. Sir William Osler has called this *aequanimitas* and defines it as the ability to bear with composure the misfortunes of others. He must be able to react with the proper combination of concern and detachment in every situation. He cannot take his problems home with him at night if he is to retain the physical and mental acuity required for the performance of his task. He cannot allow the exhilaration of success or the despair of failure to alter his reactions.

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# *Implied Consent*

## *Methods and Results — State of Tennessee, 1971*

J. T. FRANCISCO, M.D.\*

The license to drive a motor vehicle in the State of Tennessee is presently considered to be a privilege and not a right. This determination was made by the passage of what is known as the Implied Consent Law (1969) for the State of Tennessee. The scientific basis for this law has been established for many years. The statistics from various sections of the country have well documented the fact that in fatal traffic accidents, alcohol is present in the fatality approximately 50% of the time.<sup>1</sup> It is considered likely that if these studies were extended to include the responsible party for the fatal traffic accident an even greater percentage would have alcohol present.<sup>2</sup>

The ultimate stimulus for the passage of this state law came from the establishment of Federal Standards requiring each state to have an Implied Consent Law and a prohibition for driving alcohol level of 0.10% in the blood. The degree of enforcement of this law varies from state to state and from region to region within the state. The reasons for this are legion but it appears that few people believe that a level of .10 of alcohol represents a valid level for driving prohibition. The medical facts however are clear. Everyone, regardless of previous drinking experience, ability, physique, or state of nutrition has at least two of his faculties affected when his blood alcohol level reaches 0.10%: There is alteration in judgment and prolongation of reaction time. This does not mean that the driver who is under the influence of alcohol has a slower reaction time than every other driver on the road. It merely means that alcohol has altered his reaction time compared to his non-drinking driving ability.

The Tennessee Department of Public Health has engaged in a series of laboratory developments so that laboratories may be strategically placed throughout the State of Tennessee to assist in the determination of the alcohol level of the drinking driver. This paper summarizes the laboratory development and the results of

tests performed by these laboratories during the year 1971.

### ALCOHOL

Before giving the figures for these laboratories it is well to briefly review the pharmacology of alcohol. Alcohol is rapidly absorbed from the small intestine but is first absorbed from the stomach to a lesser extent. Within fifteen minutes following a drink, alcohol is detectable in the blood. Alcohol is distributed rapidly, following its absorption into the blood, to all organs in the body. The ratio of this distribution is a function of the water content of the various tissues and organs of the body. Certain organs therefore contain greater absolute amounts of alcohol than others, but once alcohol has reached equilibrium within the body there is a constant ratio that is established for alcohol. This ratio is based upon the unit value of blood as compared to that in all other organs of the body. Typical ratios are as follows: Blood/brain 1 to 1. Blood/urine 1 to 1.3. Blood/breath 1 to 2100. A knowledge of these ratios and their scientific validity is the feature that allows a breath determination of alcohol to be valid in determining the blood alcohol level. Alcohol is primarily metabolized by the liver, 90% of the alcohol ingested being metabolized in this manner. The remaining 10% is excreted in the breath and various body secretions. Approximately 6% is excreted in the urine and approximately 1% in the expired breath. After alcohol reaches equilibrium in the body and after the maximum absorption has occurred, alcohol is metabolized at a rather constant rate, reflected in a blood alcohol level which will fall at a rate of somewhere between 0.01 and 0.02 units per hour. Stated in another way, if a person at any given time has a blood alcohol level of 0.10% then he will have a negative blood alcohol level between five and ten hours later. As a general rule, the peak blood level will be attained between 45 minutes and 1 hour and 15 minutes after a person has consumed his last drink of alcohol.

The history of passage of the Implied Con-

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sent Law in the State of Tennessee is somewhat stormy, probably because most legislators believe that it is possible for two drinks (2 cans of beer) to be sufficient to produce in some people a blood alcohol concentration of 0.10%. This belief is shared by many physicians. From a physiologic, pharmacologic and biological standpoint, it is an absolute impossibility for a person to consume two 12 oz. cans of beer and attain a blood alcohol concentration of 0.10%. This fantasy is based upon the story often told by the accused when arrested, tested, and charged, that he drank only two beers.

With the final passage of this law several amendments have been necessary in order to allow equitable and fair application to all members of society. These amendments have been designed to allow for maximum enforcement, at the same time protecting the rights of the accused. The present law reads as follows: "Any physician, registered nurse, clinical laboratory technologist, or clinical laboratory technician who acting at the written request of a law enforcement officer, withdraws blood from a person for the purpose of making such (blood alcohol) tests shall not incur any civil or criminal liability as may result from a negligence of the person so withdrawing." This segment of the law protects the person when acting under proper request from having any criminal charges brought against him. The law further proceeds to state "neither shall . . . incur, except for negligence, any civil or criminal liability as a result of the act of withdrawing blood from any person submitting thereto." The present procedure is established by the Department of Public Health provides that once the specimen is withdrawn, it is taken by the law enforcement officer to the nearest laboratory providing this determination. This laboratory must be a laboratory under the supervision of the Chief Medical Examiner or an assistant chief medical examiner. Once the alcohol analysis has been determined, the medical examiner will execute a certificate which gives pertinent data and the result of the analysis. This certificate when duly attested by the responsible parties is admissible as evidence in any court in the State.

#### METHODS OF ANALYSIS

A series of regional laboratories were established

1. To provide maximum versatility to

enforcement in alcohol analysis;

2. To provide close liason between law enforcement and the laboratory providing the analysis; and

3. To provide a training vehicle whereby laboratory personnel can offer instruction to various law enforcement agencies in the methods of collection, procedures of analysis and proper interpretation of the alcohol results.

The methods for alcohol analysis are numerous. The types of specimens that may be available for alcohol analysis are also numerous. The law enforcement officer may choose to collect blood, breath or urine and each must be handled somewhat differently. The various methods available for alcohol analysis include colorimetric, physical, or enzymatic. The present method of analysis by the Tennessee Department of Public Health is a physical means using gas chromatography as basic instrumentation. Law enforcement also has an option of using what is identified here as "in-house breath testing equipment." This equipment comes under various trade names of which the Breathalyzer and Intoximeter are the most commonly used instruments. They are valuable, reliable and accurate means of determining the blood alcohol level if properly maintained and supervised. The use of these instruments suffers from the same drawback as the use of any instrument: it must be maintained and standardized if the results are to be accurate. Laboratory personnel at the regional forensic science laboratories are fully trained and capable of providing this kind of supervision. In addition to this problem the law enforcement officer will be called upon to testify regarding his results and their validity at the subsequent trial. The capacity of the officer to understand the principles involved, to clearly present these principles and their results become crucial in the subsequent prosecution of this case. The forensic science laboratory personnel carry out an active training program, offering their services to law enforcement agencies so that the law enforcement officer may be fully acquainted with the problems involved in presenting his testimony.

#### RESULTS

The total number of alcohol tests performed in the State of Tennessee during the year 1971 was 9,240. Of these 27% were analyzed in the counties having "in-house breath testing equip-

# Alcohol Test and Traffic by County 1971

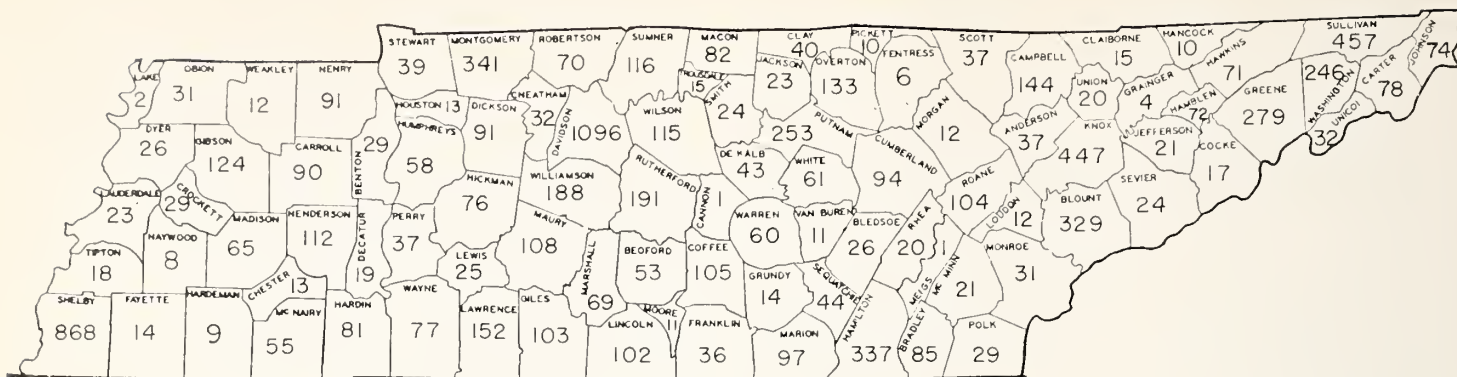


FIG. 1

ment." The remainder were analyzed in the regional forensic science laboratories. During this time there was at least one specimen analyzed for every county of the State of Tennessee. The distribution and number is shown in Figure 1. Of the group analyzed 13% were either negative or less than .05. Ten percent were between .05 and .09. The remaining percentage was greater than .10.

## DISCUSSION

There are no reliable national figures available with which to compare the total number of tests in the State of Tennessee in order to determine the total number of tests that should have been performed. It can be estimated that this figure of slightly over 9,000 is probably less than the total number that should be tested on the streets and highways of this state. It is the responsibility of each county medical examiner to obtain a blood or urine specimen from each fatal traffic accident that he investigates if the fatality is older than 12 years or if death has occurred within 12 hours of the accident. An assessment of these results in the state of Tennessee indicate that only in approximately 75% of the cases the medical examiners are complying with this regulation by submitting a specimen for analysis.

The law allows a suspect to refuse to sub-

mit to an alcohol test. If he does so, however, the law provides that his license may be revoked for a period of six months. The harshness of this penalty may seem excessive to some. The physicians of the state have a responsibility to be aware of the medical facts surrounding the drinking driver and to make these facts known in his community. Without a knowledge of the high incidence of alcohol in traffic fatalities the public support for this law will not be great. Without this kind of enforcement there is no convenient, reliable or effective means presently available to reduce the annual fatalities occurring on the roads, streets and highways of this state. The only other means would be a massive public education program, so that the driver who chooses to drink, *chooses* not to drive. Until such a program is effected, adequate, stringent, and uniform law enforcement appears to be the only conceivable means by which the annual fatality rate due to traffic accidents may be reduced in the State of Tennessee.

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# *Eating Fresh Coffee Grounds: Psychoneurosis or Sub-Clinical Pellagra*

DAVID F. MOORE, M.D.

## REPORT OF A CASE

The patient, a thirty-five year old married white female from the southern U. S., was referred for psychiatric consultation in April, 1967. Her husband was fifty-three years of age, they had been married 11 years, and it was the second marriage for each. She had been under medical care for over fifteen years for various somatic complaints and "nervousness." She had had an appendectomy when she was young and recently had an "abdominal operation."

The patient complained of abdominal pain, back pain, and dysuria. She had decreased libido according to her husband. She was occasionally suspicious of her husband, who was a traveling salesman, but he denied any infidelity and said that he was not suspicious of his wife. His wife would scream and yell when there was an argument at home, and recently her emotional outbursts were becoming more frequent. He had no complaints regarding their sexual relations. He described himself as a self-made man, who had worked seventeen years with one company with several promotions, and felt that there was no reason for his wife's feeling that he was a failure.

The patient had fears and guilt feelings, with a possible reaction formation expressed through her work in the church. She taught a Bible class for adults and was very strict regarding her religious beliefs. The husband usually stayed home on Sundays to take care of the baby.

## MEDICAL HISTORY

Reports from other physicians over the past ten years revealed that the patient was allergic to codeine but there was no known reason for her other occasional skin rashes. She had had vague and various gastrointestinal and urinary complaints. She was described as being neurotic, and as having decreased sexual interest. Her medical records from 1957 to the present revealed that she had complained of low back pain, without history of trauma, which became worse after eating and with bowel movements. At first, physical examinations were within

normal limits, but later a right tubo-ovarian mass was palpated, which was 3 cm. in size and when palpated produced low back pain. She was hospitalized in 1958, and complete medical and laboratory tests, at that time, including GI series and IVP, were reported within normal limits. In March, 1966, she had a recurrence of right lower quadrant pain, which was relieved by rest. She was readmitted to the hospital, and again all findings were within normal limits. Three weeks later, she had more severe right lower quadrant pain, aggravated by walking, which radiated to the back, which was considered to be due to adhesions secondary to her appendectomy. After several weeks nausea and vomiting supervened, plus vaginal bleeding, and she was readmitted to the hospital for an exploratory laparotomy, which revealed a redundant cecum. The pain did not recur and she was discharged from the hospital.

## NEURO-PSYCHIATRIC EVALUATION

The patient expressed feelings of insecurity, death wishes for her mother and guilt feelings. Emotionally she felt close to her father, but there was considerable ambivalence. She re-emphasized her participation and interest in the church. She indicated that her husband considered her unfaithful and that he doubted if their first child was legitimate by her first husband.

The psychopathology and dynamics were compatible with a chronic anxiety reaction and associated feelings of depression. There were suspicions and paranoid ideations as she described the family relationship. When her husband was confronted with her accusations, he stated, "she exaggerates and feels things exist which do not exist." They have a teenage daughter with a hearing defect, and both the patient and her husband cooperated in obtaining aid for her. The patient at this time was given Phenothiazine, 25 mgm., b.i.d.

In April, 1967, the patient's complaints became more severe, and she was admitted to Wm. F. Bowld Hospital. Findings were com-



patible with anxiety and depression. Her laboratory and physical findings were within normal limits. She responded to psychotherapy and chemotherapy, though mild complaints persisted, and she was discharged to out-patient status.

When asked to describe in complete detail an average day, she mentioned that for 15 years she had been eating whole coffee beans and ground coffee, as well as drinking three to four cups of coffee per day. With pregnancies, she would eat as much as one pound of coffee per week. Consultations with University of Tennessee Departments of Pharmacy and Pharmacognacy suggested a niacin deficiency which was being masked by the ingestion of coffee,<sup>1,11,12,13</sup> and a clinical diagnosis of pellagra was made.

Tranquilizers were discontinued, and her medication was changed to 500 mgm. of nicotinic acid per day. After three days her symptoms cleared. A later examination showed no evidence of anxiety, depression, or somatic complaints, even with added family stress. Her appetite increased, and after three days, she no longer craved coffee. After four months, she gained ten pounds and was asymptomatic on a maintenance dose of 100 mgm. of nicotinic acid per day.

In May, 1968, she discontinued the nicotinic acid medication and exacerbation of her previous symptoms recurred. Her medication was reinstituted, and symptoms were again relieved.

In August, 1968, the patient still felt fine and was continuing with the nicotinic acid as prescribed. She moved to another state and a letter from her, April 1972, stated she was still asymptomatic and again active in church work.

#### REVIEW OF PELLAGRA

The United States Public Health Department estimates that there are four hundred thousand cases of pellagra annually in the USA. Approximately ten per cent of the patients admitted to psychiatric institutions in the southern part of the United States have pellagra.

Pellagra is caused primarily by a deficiency, specifically, of niacin (nicotinic acid),<sup>2,5</sup> which may arise from dietary deficiency or from an impairment of absorption because of altered gastrointestinal function.<sup>8</sup> In some cases, the requirement for anti-pellagic substances may be in excess of what is supplied by the diet.<sup>10</sup>

#### SYMPTOMATOLOGY

Predisposing factors may play a role in the pathogenesis of this disease. Often patients complain of fatigue, insomnia, loss of teeth, infections, food idiosyncrasies, and difficulty in the metabolic utilization of food. The marked improvement and prompt response in many pellagrins who receive intensive appropriate dietary treatment leaves no doubt that this disease is associated with a dietary deficiency. Pellagra dermatitis is not always present but may be shown as symmetrical lesions on any portion of the body. When present, the eruption is most common over places of irritation such as the hands, wrists, elbows, neck, under the breasts, knees and feet, and in the perianal region.

The alimentary tract is frequently involved, and there may be diarrhea with or without abdominal pain or discomfort, which when present is usually more severe after a large meal. Nervousness, lack of sleep, headaches, dizziness, and muscular weakness are frequent. Pellagrins are subject to periods of mental depression and apprehension, and unless properly treated, secondary psychotic symptoms may appear, such as hallucinations, delirium, disorientation, and other mental aberrations. Genito-urinary symptoms, primarily dysuria, are frequent. Libido is often decreased, and in women there is frequent vaginitis. Menstruation may be scanty or absent.<sup>4</sup>

Some believe that most mental diseases are molecular diseases, the result of a biochemical abnormality in the human body. The mind is a manifestation of the structure of the brain, an electrical oscillation in the brain supported by its material structure. The mind can be made abnormal by an abnormality in the chemical structure of the brain itself, which is usually hereditary in character, though sometimes caused by an abnormality in the environment. The mental manifestations of Pellagra can be relieved by correcting the molecular abnormality that produces them.<sup>14</sup>

#### SUMMARY

This is a case report of sub-clinical pellagra. The usual symptomatology was masked by a craving of the patient which caused her to eat coffee, which contains considerable amounts of niacin.

The presence of unrecognized mild pellagra leads to numerous complaints that are at times



regarded as neurotic and probably psychogenic.

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## clinicopathologic conference

### Superior Sulcus Tumor\*

*Present Illness:* This 59-year-old white male carpenter entered the VA Hospital for the ninth time because of chest pain for the past 14 months. The pain, located in the left anterior chest and radiating through to the back and left arm along the ulnar aspect to the 4th and 5th fingers, had been constant, and was not relieved by nitroglycerin. It had been worse in the past few weeks and had kept him awake, though "shot" by his local physician gave him relief. He has had some ankle swelling, especially marked in the later afternoon and evening and usually disappearing by morning. The only medication he took since his last discharge was Darvon and nitroglycerin, neglecting his digitalis and reserpine.

His first four admissions, starting at age 50, were for hernias and third degree burns of the right leg. On the fifth admission, he was treated for acute thrombophlebitis of the right leg. At age 58 he was admitted for the sixth time and was discharged with the following diagnoses: hypertensive cardiovascular disease; arteriosclerotic heart disease with angina and aortic stenosis; anterior myocardial infarction, remote; pulmonary fibrosis and emphysema; benign prostatic hypertrophy; calculus, left kidney; arthritis, cervical spine. Chest x-ray at that time showed a heart of normal size and no pulmonary infiltration.

His seventh admission six months later was because of left chest, cervical and shoulder pain, and numbness of the left arm. The effect of nitroglycerin on his chest pain was difficult to evaluate. It was felt that he also had a depressive reaction, but he refused electroshock therapy. His blood pressure, which was 230/130, came down to normal levels.

His eighth admission during the same year was again for the same type chest pain radiating into the left shoulder and arm. Chest x-ray at that time revealed calcification of the aortic knob, a tortuous thoracic aorta and clear lung fields.

His present and final admission was approximately six months later.

*Physical Examination:* Temperature 100.8°, pulse 90, respiration 20, ht. 71, weight average 185, present 135, blood pressure 120/65. He was described as a poorly nourished, cooperative white male in no acute distress. He had slight ptosis of the left eyelid and some narrowing of the retinal arterioles. The left pupil was slightly smaller than the right. The AP diameter of the chest was increased and breath sounds were very faint. A few dry rales were heard in the left lung base. The heart sounds were distinct with regular sinus rhythm and the left border of the heart was not percussible. A grade II/VI aortic systolic

murmur was heard. Cephalic and chest veins were very prominent. All peripheral pulses were palpable. There was weakness and poor mobility of the pectoral girdle. Neurological exam was normal. Lymph nodes were not enlarged. The rectal exam showed thrombosed hemorrhoids and a Grade I prostatic enlargement.

*Laboratory Data:* Hct. 43%, Hbg. 13.7 gms., WBC 14,200, neutrophils 87, lymphocytes 5, monocytes 4, eosinophils 4, CSR 31. Urine had a trace of albumin with 3-4 WBC and RBC's and occasional granular and hyaline casts. BUN 15 mg.%, CO<sub>2</sub> 32.5 mEq/L, chlorides 92 mEq/L, sodium 141 mEq/L, potassium 2.8 mEq/L, STS negative, transaminase 88 units, calcium 10.2 mg.%, bilirubin 0.6 mgm.%, spinal fluid—colloidal gold normal, chlorides 126 mEq/L, sugar 115 mg.%, protein 50 mg.%.

The admission EKG was abnormal, with ST-T changes, prominent P waves and low voltage in the limb leads. Subsequent EKGs showed AV block, 2:1 flutter and findings suggestive of pulmonary embolus or infarction.

*X-rays:* X-ray on admission revealed the heart to be somewhat larger than on previous admission, but still within normal limits. The aorta was tortuous, the knob calcified. An opacity about the left apex was somewhat more prominent than an examination of the chest x-ray on a previous admission.

*Hospital Course:* He continued to complain of chest pain and at times he was confused. On the third day he had a marked tachycardia and irregularities for which he was given potassium. On the fifth day he became febrile and had a deep productive cough. X-ray of the chest showed some veiling at the left base. Rhonchi were present in the posterior aspect of both lungs. Sputum showed a few pus cells and cultures grew a few colonies of *Nisseria* species, for which he was given antibiotics. Another chest x-ray on the eighth day revealed consolidation of the right base. A thoracentesis yielded 100 cc. of bloody fluid, which contained no organisms. A blood culture was obtained. On the 11th day, tonic and clonic seizures were observed. His BUN was 97 mgs.%, potassium 4.3 mEq/L and transaminase 55 units. He expired on the 12th hospital day.

### CLINICAL DISCUSSION

DR. JOHN C. LARKIN, JR.: There are not a great many conditions other than malignancy that will give a picture of constant pain for 14 months. I cannot think of any of the infectious processes that would cause pain in this area, with no disease seen initially radiologically, and finally with a small amount of disease in this area seen radiologically. Tuberculosis can cause pain but it does not usually do so, although it may erode through the chest wall and cause a cold abscess and pain. One would have seen considerable disease radiologically if the symptoms were due to tuberculosis. The same picture would be seen in actinomycosis,

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which would cause pain also if erosion through the chest wall occurred.

I believe that he had a malignancy beginning either in the upper part of the lung, the base of the neck or possibly in the cervical or dorsal vertebrae, which would give this type of pain with radiation down the arm. If it had been in the base of the neck, we should have been able to feel a mass there. There was no evidence by x-ray of any bony erosion, and a malignancy beginning in the vertebrae would have shown some bony change by this time.

The so-called "superior sulcus tumor" is characterized by pain in the chest and a radiation down the ulnar aspect of the arm. It is very frequently associated with a Horner's syndrome due to involvement of the sympathetic chain. We are told that this man had slight ptosis and miosis. The prominence of the cephalic and chest veins could be caused by pressure by the tumor on the superior vena cava in the upper mediastinum. Finally we see the x-ray abnormality in the apex which had not been present. Frequently one will see bony erosion of ribs or vertebrae present as part of the picture. A superior sulcus tumor may be due to any neoplasm, but it is usually a bronchogenic carcinoma. A metastatic lesion to this area is very rare. Occasionally sarcomas occur here. The diagnosis can sometimes be confirmed by cytology. Bronchoscopy may confirm the diagnosis only by the aspiration of malignant cells, but the tumor cannot be seen or biopsied through the bronchoscope. Scalene node biopsy may be a means of diagnosis.

Bronchogenic carcinoma has been associated with adrenal cortical hyperfunction. The picture has varied from a hypokalemic alkalosis to a true picture of Cushing's syndrome. It is due to hyperplasia of the adrenal cortex as a result of some ACTH-like material elaborated by the tumor. This happens not only in carcinoma of the lung, but also with carcinoma of other organs, although bronchogenic carcinoma has been the most frequent tumor associated with it. Undifferentiated bronchogenic carcinoma has been the type most often seen. Many of these people will have increased amounts of steroid in the urine; many of them are abnormally sensitive to ACTH stimulation; and there is no suppression of secretion by dexamethasone. This diagnosis in our case is on tenuous grounds, and it is based only on the finding of hypokalemic alkalosis. Although this is not enough

to make it a diagnosis, it certainly is enough to cause one to suspect it. He did have a mild lowering of the chlorides also. We are not told of any other reasons for his low potassium. He did not have diarrhea, vomiting, or gastric drainage, nor did he receive steroids or diuretics. All of the above are the more common causes of hypokalemia. The diagnosis could be confirmed by studies of the adrenocortical hormones.

Later on during his course he had pulmonary involvement. On the fifth day he became febrile, had a cough, and chest x-ray showed some veiling. Perhaps he had a pneumonitis or pulmonary infarction at that time. Next he developed a bloody pleural effusion which certainly would go along with pulmonary infarction. The chest x-ray was consistent with it, and the EKG was suggestive of it. The SGOT levels were 88 and 55, neither of which is greatly elevated. There have been various vascular complications with malignancies, and migratory thrombophlebitis has been one of the early manifestations of malignancy. Most commonly these malignancies have been malignancies of the abdominal cavity rather than the lung, but they have also occurred with bronchogenic malignancy. This man did not have a migratory thrombophlebitis, but he could certainly have had a deep thrombophlebitis. A rare occurrence in pulmonary malignancy and chronic pulmonary disease is thrombosis of pulmonary veins. Most of these patients have had active pulmonary tuberculosis. It has been thought that they have a pulmonary embolus first and then develop thrombosis later. They became extremely short of breath and cyanotic; some of them have lived for months, although most of them die very quickly. Characteristically the x-ray shows a radiolucency in the lung rather than a density. I mention this only as a distant possibility in this patient.

There are several explanations for the convulsion. We know that bronchogenic carcinoma metastasizes to the brain very frequently and may cause convulsions. Another possibility is that of multiple emboli to the brain from non-bacterial verrucous endocarditis which occurs in malignancy. One of the vascular complications in malignancy and various debilitating diseases is non-bacterial verrucous endocarditis in which these vegetations occur on the valves, most commonly on the mitral and less commonly on the aortic valves. Their chief mani-



festation is embolization without fever or other findings directed to the heart. One of the most frequent forms of embolization is cerebral embolization. Paradoxical embolism is a very rare possibility.

One thing I cannot explain is the rise in BUN from 16 to 97 mgs.%. Vomiting or diarrhea may be possible causes. The potassium did not rise during this time. Embolization to the kidney could cause a rise in BUN, but renal infarction is usually accompanied by rather severe pain and usually by some hematuria, neither of which we are told that this patient had. I do not think that his previously known cardiac disease played a part in the final illness other than possibly contributing to pulmonary embolization.

My diagnoses are (1) superior sulcus tumor, bronchogenic carcinoma type; (2) probable adrenal cortical hyperplasia; (3) pulmonary infarction; (4) probable cerebral metastases from carcinoma, although I cannot be sure that he did not have emboli from non-bacterial endocarditis; (5) arteriolar nephrosclerosis; (6) renal calculus and possible pyelonephritis; (7) calcific aortic stenosis; (8) arteriosclerotic heart disease with old myocardial infarction.

#### ANATOMIC FINDINGS

DR. J. M. EMANUEL: At the time of autopsy there was a small amount of straw-colored fluid in the right pleural space. The right lung weighed 800 grams and approximately half of the lower lobe was infarcted; and many partially organized thrombi were noted in the radicles of the pulmonary artery.

The left lung was removed with difficulty and a mass was noted in the apical region of the

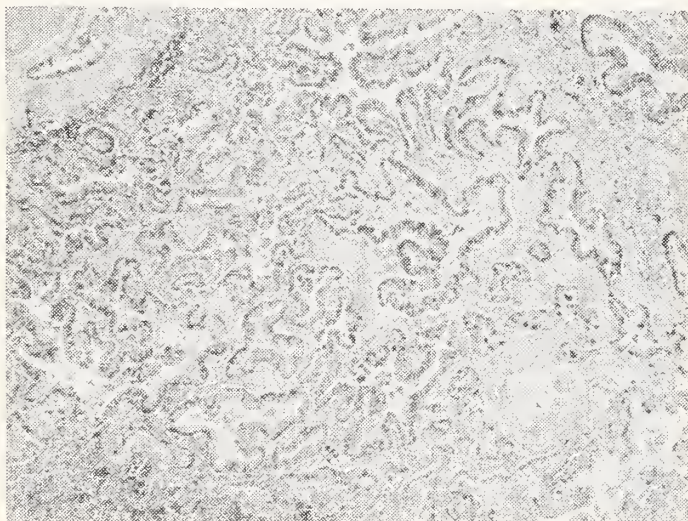


FIG. 1 Apex of lung

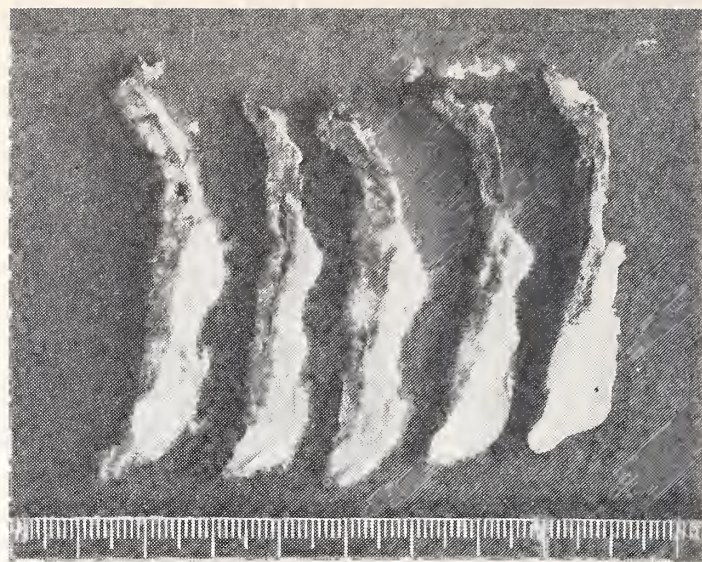


FIG. 2 Photomicrograph, X60, showing adenocarcinoma

left pulmonary cavity. This mass was removed with great difficulty; it was torn loose from the apex of the lung as the lung was removed. Figure 1 is simply serial sectioning through the mass showing a small amount of lung tissue, anthracotic pigment, and the tumor, which was 1 x 5 cm. in gross dimensions. Figure 2 is a microscopic section of this tumor showing the cuboidal to columnar epithelial cells that make up these gland-like structures which contain a small amount of slightly basophilic staining, mucoid-like material. Also, it shows a dense fibrous stroma. It is a moderately well-differentiated adenocarcinoma with many mitoses. Malignant cells were present in the thoracentesis fluid.

The heart and pericardium also were involved. The pericardial sac contained approximately 200 cc. of unclotted blood. The surface of the heart was covered with fibrinous material, and the ascending aorta and pulmonary artery were involved by masses of dense tumor tissue. The same type of tumor invaded the epicardial fat on the heart. Figure 3 is a view of the heart showing fibrinous pericarditis, a nonbacterial thrombotic endocarditis of the aortic valve, and the myocardium thinned out with a large mural thrombus at the apex. There was embolization from either this thrombus or the verrucae of the endocarditis because, as you will see later on, he did have infarction of other organs. The apical myocardium showed infarction and inflammation. The aortic valve showed verrucous masses composed of fibrin with some organization.

A section through a kidney showed a partially organized thrombus lying in a large artery.





FIG. 3 Heart with verrucous endocarditis of aortic valve, fibrinous pericarditis and area of apical thinning with mural thrombus.

Both kidneys had areas of infarction, and this probably is one reason that his BUN was elevated.

There were metastases to the mediastinal lymph nodes showing the same type adenocarcinoma and some of the nodes were described as being 5 cm. in diameter. In reviewing the chart I noted that the patient developed a hoarseness in December 1964, which was approximately two months before he died, and this indicates involvement of the recurrent laryngeal nerve. The tumor did involve peritracheal, right hilar and left hilar nodes.

He also had a metastasis to the hypothalamus on the left, and I might note that some of the previous earlier convulsions noted were described as jerking in the right shoulder and jaw, and then generalized tonic and clonic seizures were described just before he died. In the left occipital region he had a thrombus in a vessel with an area of infarction.

In addition, the adrenals were described as being enlarged and showing diffuse areas of golden yellow cortical hyperplasia, confirmed by sections. There was also an adenocarcinoma of the prostate, which showed perineural lymphatic invasion, but the two tumors are distinctly different and are of different origin. This patient did have a superior sulcus tumor of the bronchogenic, adenocarcinoma type.

#### FINAL ANATOMICAL DIAGNOSES

1. Superior sulcus bronchogenic adenocarcinoma, left, with metastases to regional lymph node, hypothalamus, epicardial fat, and ascending aorta.

2. Generalized arteriosclerosis.
3. Non-bacterial verrucous endocarditis, aortic valve.
4. Multiple infarcts, kidneys, heart, and left occipital lobe.
5. Multiple pulmonary emboli with infarctions, right lung.
6. Adenocarcinoma of prostate.

DR. HUGHES: Are squamous cell tumors the most common?

DR. EMANUEL: My impression is that the squamous tumor is the most common. However, I did see an article<sup>1</sup> recently trying to correlate the superior sulcus tumors with apical scars and in most of their cases the patients had adenocarcinomas.

DR. YOUNG: Bronchiolar carcinoma has also been reported. This is a particularly good teaching case, I think, because the patient received no irradiation to the tumor. It illustrates very well, too, why one frequently does not get positive findings from bronchoscopy. The lesions are in the periphery of the lung and invade the adjacent structures before they involve bronchi. This tumor invaded the lung tissue only to a very limited degree. In some of these peripherally placed lesions one can have calcified areas that are actually surrounded by the growth of tumor. The finding by x-ray of calcification in them would not rule out a carcinoma. While other tumors can involve this area of the brachial plexus and give the so-called superior sulcus syndrome as Dr. Larkin pointed out, bronchogenic carcinoma is certainly by far the most common tumor to do so. This particular tumor today I think behaved so everybody could be right in his diagnosis from the pericarditis to the myocardial infarction by marantic thrombi. Dr. Larkin, how would you go about diagnosing a superior sulcus tumor if you suspected one on the basis of a few physical findings and the history of pain such as this patient had. Would you use a needle biopsy perhaps?

DR. LARKIN: Well, certainly cytology and probably bronchoscopy would be indicated. I do not believe that I would do a needle biopsy.

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## HISTORY

This 50 year old gentleman began to experience angina pectoris approximately two months prior to admission to St. Thomas Hospital. His symptoms were originally related to exertion, but more recently occurred also at rest. Because of the progressive nature of his symptoms he was admitted for coronary arteriography. Illustrated are his admission ECG (Fig. 1), ECG taken during angina pectoris while at bed rest the morning before coronary arteriography (Fig. 2), ECG one hour later following resolution of chest pain (Fig. 3) and a single frame view (from the cineangiogram) of the left coronary artery in left anterior oblique projection (Fig. 4) showing severe occlusion of the proximal anterior descending coronary artery.

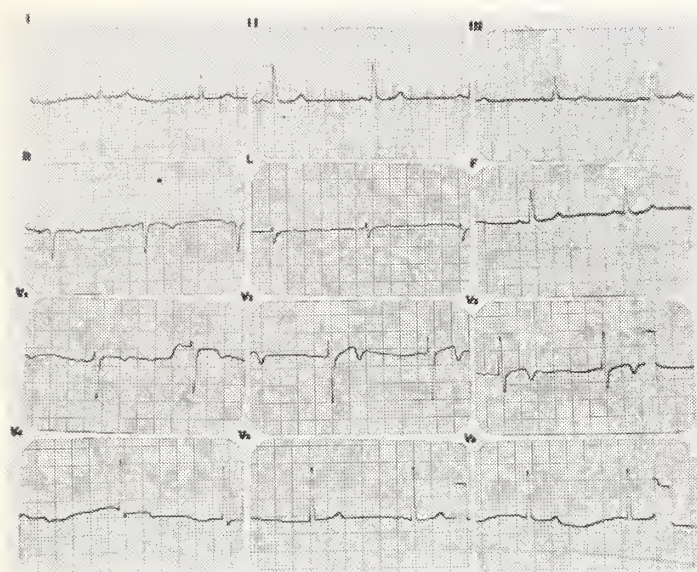


FIG. 1

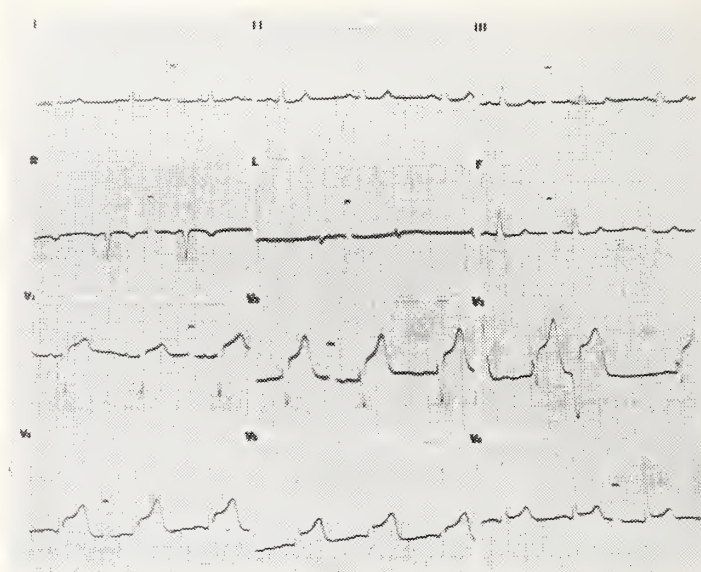


FIG. 2

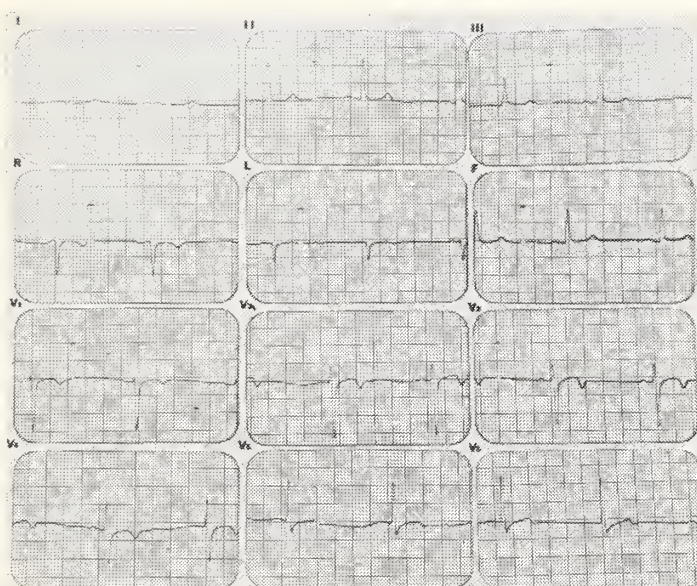


FIG. 3

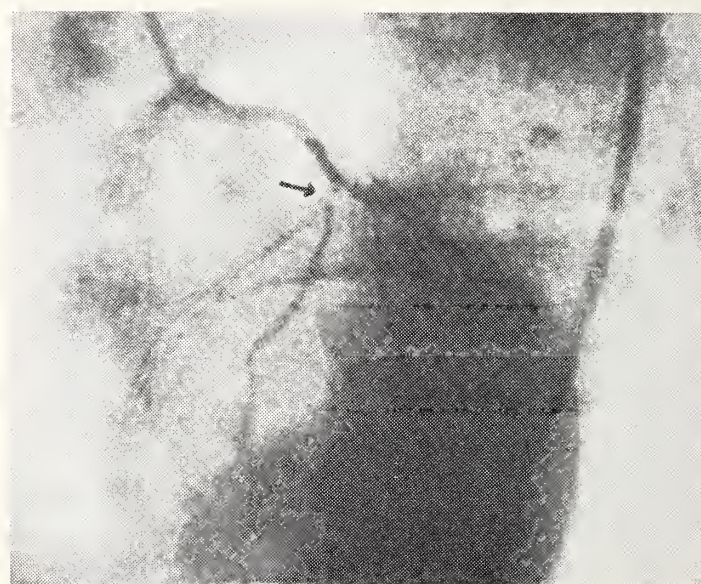


FIG. 4

## DISCUSSION

Transient marked ST segment elevation occurring during resting angina pectoris was originally described by Prinzmetal,<sup>1</sup> a syndrome now commonly referred to as "variant angina." It was Prinzmetal's impression that this phenomenon usually indicates significant isolated obstruction of the major coronary artery supplying the ischemic myocardium associated with the ST segment elevation. Patients demonstrating this phenomenon are felt to have a high incidence of subsequent myocardial infarction. Subsequent reports in the literature suggest that this syndrome is more heterogenous than originally assumed and variations on the original description are relatively frequent. Although the patients originally described by Prinzmetal were found to have no symptoms or ECG changes during exercise, other patients have been

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subsequently noted to have angina and transient ST elevation with exercise. Some patients with this phenomenon have been asymptomatic with normal ECG's for many years following these ST changes. More recently reports have appeared of normal coronary arteriograms in patients with otherwise typical variant angina.

Why the ST segments become elevated rather than depressed in variant angina is unknown. The etiologic role of possible associated coronary arterial spasm, transient platelet aggregation in small coronary vessels, etc., remains a moot question. In spite of the inevitable exceptions to previously formed generalizations about the syndrome, it seems reasonable to assume that patients exhibiting this phenomenon are at increased risk of myocardial infarction and should be so treated until proved otherwise.<sup>2</sup>

This patient underwent a saphenous vein bypass graft to his anterior descending artery with gratifying clinical results and stabilization of his ECG.

Final ECG diagnosis: Transient ST segment elevation of the "variant" or "Prinzmetal" variety.

Final anatomic diagnosis: Isolated segmental obstruction, anterior descending coronary artery.

Harry L. Page, Jr., M.D. and W. Barton Campbell, M.D., Co-directors.

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2. Silverman, ME; Flamm, MD, Jr; Angina Pectoris Anatomic Findings and Prognostic Implications. *Ann Int Med*, 75: 339, 1971.

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Survey of Licensed Physicians by County in the State of Tennessee. This study reveals the number of licensed physicians compared with TMA membership in each County.

County	*Licensed Physicians	T.M.A. Members	County	*Licensed Physicians	T.M.A. Members	County	*Licensed Physicians	T.M.A. Members	County	*Licensed Physicians	T.M.A. Members
ANDERSON	78	71	FENTRESS	4	3	LAUDERDALE	8	6	ROANE	20	15
BEDFORD	15	12	FRANKLIN	12	10	LAWRENCE	15	13	ROBERTSON	11	10
BENTON	5	5	GIBSON	25	21	LEWIS	4	3	RUTHERFORD	59	43
BLEDSON	2	2	GILES	7	7	LINCOLN	14	12	SCOTT	7	7
BLOUNT	58	54	GRAINGER	3	2	LOUDON	9	8	SEQUATCHIE	2	2
BRADLEY	36	34	GREENE	30	27	MCMINN	25	18	SEVIER	17	14
CAMPBELL	13	10	GRUNDY	2	1	MCMINN	7	4	SHELBY	1479	946
CANNON	5	5	HAMBLETON	32	25	MACON	3	2	SMITH	7	7
CARROLL	8	6	HAMILTON	400	344	MADISON	82	74	STEWART	2	1
CARTER	19	16	HANCOCK	1	1	MARION	12	11	SULLIVAN	180	143
CHEATHAM	3	2	HARDEMAN	14	9	MARSHALL	13	11	SUMNER	25	21
CHESTER	4	4	HARDIN	12	9	MAURY	38	34	TIPTON	14	9
CLAIBORNE	8	5	HAWKINS	9	7	MEIGS	2	2	TROUSDALE	3	2
CLAY	4	3	HAYWOOD	9	6	MONROE	11	10	UNICOI	5	4
COCKE	8	7	HENDERSON	7	7	MONTGOMERY	42	41	UNION	1	1
COFFEE	18	15	HENRY	24	21	MOORE	1	1	VAN BUREN	1	1
CROCKETT	4	4	HICKMAN	3	3	MORGAN	1	0	WARREN	12	12
CUMBERLAND	19	18	HOUSTON	4	3	OBION	27	22	WASHINGTON	101	87
DAVIDSON	971	673	HUMPHREYS	7	5	OVERTON	9	5	WAYNE	3	3
DECATUR	2	2	JACKSON	5	4	PERRY	3	2	WEAKLEY	15	15
DEKALB	6	3	JEFFERSON	12	12	PICKETT	2	2	WHITE	8	6
DICKSON	12	8	JOHNSON	4	3	POLK	6	5	WILLIAMSON	20	16
DYER	29	24	KNOX	467	380	PUTNAM	27	23	WILSON	14	14
FAYETTE	8	8	LAKE	3	3	RHEA	7	3	TOTAL	4805	3595

\*Licensed physicians include a number of physicians who have retired or are living out of State. They are included in the totals because many are veteran members of the Association.

**THE COOPER QUIZ\***

(answers to be found on pages 170, 171, 172, 173, 175)

*True or false except as indicated.*

1. Marihuana smoking causes an increase in pulse rate and an increase in limb blood flow. This is the result of a) vagal activity (b) beta-adrenergic mechanisms
2. Because of the cardiovascular effects of marihuana smoking, when these people are involved in traffic accidents, the use of premedication with atropine and the use of local anesthetics containing epinephrine may be dangerous.
3. Persons with sickle-cell anemia may develop hemolytic crisis if their G-6-PD level falls too low (as a result of infection or drugs).
4. Hyperactive children treated with stimulants definitely have a suppression of weight gain. It is entirely possible that long-term administration of stimulant drugs may cause increased growth (height).
5. Immunosuppressive drugs are used in the treatment of immunologic disorders with the hope that they will inhibit the production of pathogenic antibodies or suppress the inflammatory responses caused by antigen-antibody reactions.
6. Which kinds of infections have more of the so-called "natural antibodies"?  
(a) streptococcal and pneumococcal infections  
(b) enteric gram-negative bacilli infections
7. When using cytotoxic drugs, leukopenia must be induced before there is any beneficial effect.
8. Termination of pregnancy is considered relatively a safe procedure. Bleeding, uterine perforation, infection and thromboembolism are well known complications. No complications have been reported after the use of intra-amniotic injection of hypertonic saline solution.
9. The frequency of death, recurrent embolism and bleeding have been (a) more (b) less when heparin is given intravenously.
10. It is (certain) (uncertain) that monitoring the dose of heparin offers any advantage over the standard dose regimen.
11. A recent Canadian study suggest that the recurrence of venous thromboembolism is rare during heparin administration if the dose is adjusted to prolong the activated partial thromboplastin time to greater than  $1\frac{1}{2}$  times control levels.
12. The reason atropine is used in the treatment of patients with heart disease is to prevent a slow rate reducing the cardiac output.
13. Chronic analgesic ingestion may induce thrombocytopenia. This is due to (a) the drug itself (b) a metabolite of the drug.
14. Any increase in the maintenance dose of salicylate will result in more than a proportional rise in the plateau level of salicylate in the body.

\* We are indebted to William T. Snagg, M.D., Director of Medical Education, The Cooper Hospital, for permission to reprint portions of "The Cooper

Quiz." Published monthly by the Dept. of Medical Education, The Cooper Hospital, Camden, N.J. 08103.



15. Fingerprints in women may be used to suspect spontaneous abortions.
16. Both infections and viral hepatitis can be transmitted by either the oral or parenteral route.
17. Serum concentrations of IgM are higher (early in the disease) in viral hepatitis than in serum hepatitis. However, there is too much overlap of values to make this a reliable criterion.
18. Thymol turbidity levels are (during the acute phase) higher in infectious hepatitis than in serum hepatitis. The difference makes this a satisfactory criterion for differential diagnosis.
19. Stamonium by mouth is relatively non-toxic, but inhaled (as smoke) it is toxic.
20. Arteriosclerosis producing stroke seems more related to the level of hypertension than to cholesterol blood level.
21. An English drug albuterol (salbutamol) has many properties of isoproterenol; recently its effect as an aerosol on asthma has been compared with isoproterenol. Which had the longer bronchial dilating effect? (a) isoproterenol (b) albuterol
22. Many laboratories when measuring VMA (test for pheochromocytoma) require rigid dietary restriction before and during urine collections. It has recently been proven that diet (does) (does not) influence VMA levels.
23. Long-term hemodialysis in small children can be done successfully. Failure to grow during treatment occurs in most of these children.
24. Brain scanning in children yields its greatest rewards in cases of generalized seizures and mental or behavioral abnormalities.
25. Is it possible to diagnose chronic active hepatitis without a liver biopsy?
26. There are no drugs that will increase athletic performance.
27. One of the physiologic effects that makes marathon running possible is the ability not to accumulate blood lactate.
28. In an Albany study of Hodgkin's disease that covered two decades, there is found a pattern that was similar to that of an infectious disease.
29. The Albany study of Hodgkin's disease suggests that a carrier (was) (was not) involved.
30. In iron deficiency anemia, cobalt absorption is (increased) (decreased)
31. In using cobalt as a test for iron deficiency, the urinary excretion of cobalt is much less in iron deficient anemia than in anemia of other causes.
32. The use of radioactive cobalt in testing for iron deficiency should be restricted because of cobalt toxicity and radiation exposure.
33. Farmer's lung is in reality an attack of asthma resulting from repeated exposures to moldy hay.
34. After months or more of exposure the patient with farmer's lung may present with a picture indistinguishable from that of diffuse interstitial fibrosis.
35. Hilar lymphadenopathy is a roentgenologic feature of farmer's lung.

**VITAMIN B12—REVISITED:\***  
**THE SCHILLING TEST**

Because knowledge of the biochemistry and physiology of Vitamin B12 has recently expanded, because improved methods of testing important parameters of Vitamin B12 metabolism have been developed, and because some of the tests of Vitamin B12 metabolism which were promoted at an earlier time are withering from disuse atrophy, it seems reasonable to revisit this interesting clinical area.<sup>1,2</sup>

Vitamin B12 is essential for life, is manufactured only by certain microorganisms, and is physiologically active in extremely small quantities. It combines with adenosine to form a group of coenzymes which are important in methylation, DNA synthesis, Ribosome protein synthesis, and lipid metabolism. The methylation reactions are essential for the utilization of folic acid and the transfer of folic acid into cells. Hence, in Vitamin B12 deficiency, folic acid levels are high in the serum and low in the cells.<sup>3</sup> The DNA synthesis is critical in the proper maturation of hemopoietic cells.

Vitamin B12 can be absorbed only if there is enough gastric acidity to release it from ingested protein, if the stomach has manufactured enough intrinsic factor with which the Vitamin B12 can form a complex, if the complex can attach to the ileum, and if the active transport system in the ileum functions normally to transfer the Vitamin B12 to receptor proteins in the blood stream. Approximately eight hours after ingestion, maximal concentrations of the Vitamin will be seen in the serum.

When there is atrophy of gastric mucosa from any cause (e.g.: autoimmune reactions, surgery, radiation, chemical damage) not enough intrinsic factor is produced and reduced absorption of B12 results. If antibodies to intrinsic factor or to the intrinsic factor—B12 complex are present, absorption by the ileum will be prevented and reduced blood levels will ensue. If there is primary disease of the ileum, reduced absorption of B12 results. If fish tapeworm or bacteria are present in blind loops or in diver-

ticula, they may utilize most of the vitamin and reduced absorption of Vitamin B12 results. Finally, poorly understood reduced absorption of Vitamin B12 can be seen in gluten enteropathy, exudative enteropathy associated with skin diseases, severe pancreatic disease, severe malabsorption syndrome with diarrhea, and as a familial disorder in some children. In all of these conditions, the serum level of Vitamin B12, both bound and unbound, will be reduced.

Once in the blood stream, Vitamin B12 will normally combine with transcobalamin II (a beta globulin) and will quickly leave the blood and be carried to the cells. Almost 50% will be taken up by the liver. Significant amounts will be taken up by the hematopoietic system and by endocrine glands. The vitamin will be retained by tissues for a very long period of time. Excretion is principally via bile. Only when the normal protein binding sites are saturated, will any B12 be excreted by the kidney. Diseased kidneys may, of course, reduce the excretion of excess B12. Some Vitamin B12 will combine with transcobalamin I, an alpha globulin, probably as it leaves body cells and circulates again in serum. In chronic myelogenous leukemia large quantities of Vitamin B12 are seen in the blood and almost all of it is attached to transcobalamin I. In hepatoma, the Vitamin B12 binds to a specific abnormal gamma globulin, while in polycythemia and leukocytosis an abnormal protein (possibly transcobalamin III, a beta globulin) binds most of the B12. In myelogenous leukemia, polycythemia, leukocytosis, and hepatoma, the serum B12 levels are elevated.

In the nuclear medicine laboratory, the classical Schilling test, developed in the early 1950's, led to significant improvement in the evaluation of patients suspected of having pernicious anemia or subacute combined disease of the nervous system, and still is the mainstay of diagnosis. Since those days <sup>57</sup>cobalt has replaced <sup>60</sup>cobalt as a label for Vitamin B12, because it delivers less than 1/30 of the dose of radiation to a patient and the energy of its gamma ray is more easily utilized.

Tests of liver uptake of Vitamin B12 have

\* From the Department of Nuclear Medicine, Parkview Hospital, Nashville, Tenn.



not stood the test of time principally because variations of liver size, shape, and function made standardization of the tests impossible. Furthermore, <sup>60</sup>cobalt in large quantities had to be utilized, and the test usually took seven to ten days. Similarly, plasma levels of absorbed Vitamin B12 have not gained wide acceptance in the literature, because low counting rates led to long counting time and poor statistics, and it was often inconvenient to draw blood eight hours after ingestion of the B12. Tests of Glomerular filtration with labelled Vitamin B12 have also fallen by the wayside, principally because large doses of labelled B12 were needed (relatively expensive) and better radiopharmaceuticals have been developed. Finally, whole body counters, which are relatively expensive installations, are not heavily utilized for clinical B12 absorption studies even in institutions where this facility is available because it takes seven to ten days to complete the test.

The classical urinary Schilling test, when used in conjunction with intrinsic factor or antibiotics as needed, provides information about primary pernicious anemia, blind loop syndrome, and primary disease of the ileum. If the serum Vitamin B12 level using a radiosorbent technique<sup>4</sup> receives the rapid acceptance that it appears to deserve, and if DEAE column separa-

tion of various transcobalamins become more widely available, then Vitamin B12 studies will take on added significance in the evaluation of patients with myeloproliferative diseases, with hepatomas, and with polycythemia. Finally, <sup>57</sup>cobalt Vitamin B12 has now been successfully utilized at the operating table for localization of relatively small parathyroid adenomas.<sup>5</sup> This, of course, necessitates special (though not excessively expensive) counting equipment and large (relatively expensive) doses of <sup>57</sup>cobalt labelled B12.

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Robert L. Bell, M.D., Director  
230-25th Ave., No.  
Nashville, Tenn. 37203

\* \* \*

## The Return of the Scabies Mite

After an absence of almost two decades the itch mite (*Sarcoptes scabiei*) has returned to reside with a sizable portion of the world's population. Children and young adults appear to be especially susceptible, particularly when living under conditions of crowding and poor personal hygiene. The epidemic recurrence of scabies every 15 to 20 years is thought to have an immunologic basis.

Diagnosis is made by finding the body or parts of the body of the tiny (0.35 mm) mite, usually at the end of a burrow. The lesions, some of which may be vesicular, are characteristically found in the interdigital spaces of the fingers, the palms, the wrist flexures, the

inner and posterior side of the elbows, the anterior axillary folds, belt line, buttocks, and the margins of the soles of the feet.

The diagnosis can be easily missed if the lesions are sparse, as they frequently are, or if their appearance is altered by topical steroids, certain irritating medications or by scratching and rubbing.

ROBERT M. ADAMS, M.D.

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—Reprinted from *California Medicine*, Aug. 1972.

### **Establishment of State Center For Health Statistics Recommended**

The Biostatistics and Epidemiology Departments of the Tennessee Mid-South Regional Medical Program felt the need for standardized health data in the state of Tennessee. Dr. Paul E. Teachan, Director of the Tennessee Mid-South Regional Medical Program, contacted Dr. Eugene Fowinkle, Chairman of the Tennessee Department of Public Health, to determine if a study could be made to see if a state center for health statistics was needed in Tennessee. A meeting of interested health professionals was set up, and it was decided that a task force should be formed to study the problems of health data fragmentation.

The task force was set up by the Tennessee Health Planning Council, a division of the Tennessee State Department of Public Health. Members included representatives of federal, state and local health agencies, insurance company representatives and others interested in the need for standardized health data in the state. It has recommended that a state center for health statistics be established here in Tennessee. The center would gather all data pertaining to health, which would include demographic data, mortality data, health cost data, and statistics relating to needs in certain areas of the state.

The Health Planning Council has already received an H.E.W. grant to conduct surveys and gather statistics in three areas: availability of health manpower, physical health facilities in Tennessee, and health needs of the health consumer in Tennessee. This information will provide an important beginning to the functions of the state center for health statistics when it is established. (See "From the Dept. of Public Health," p. 157, this issue.) The task force also recommended that the center should include in its work program a number of functions

not presently undertaken by existing agencies, but should also incorporate some current activities including data collection, standardization, processing, analysis, evaluation, dissemination, special studies, program assistance, and information referral.

A subcommittee on functions of a data referral center recommended the state center for health statistics be headed by a director, to be responsible for the overall operation of the center and to oversee the activities of four assistant directors in charge of vital records, data processing, statistics and information and referrals, respectively. They also recommended that an advisory committee be set up to assist the center in the periodic review of the usefulness of the data and to provide feedback to the director on how outsiders view the operation of the center. Members of the advisory committee, they said, should be knowledgeable users of health data.

A second subcommittee appointed to establish the need for such a center pointed out that although there are health statistics available in Tennessee, some of them are outdated. There is also some duplication of surveys, and there is fragmentation and poor coordination of health statistics. Although some of the surveys are good, some people do not know how to go about finding health data information. A bibliography of statistical data on health planning in Tennessee prepared by the Office of Comprehensive Health Planning lists 543 data files from approximately 1,200 different sources.

The task force recommended the center be located administratively in the Tennessee Department of Public Health and be financially supported from funds already being used for data services, from additional allocations from the state legislature, and from funds possibly available through grant applications to the U.S. Department of Health, Education and Welfare.



**from the  
executive  
director**

**J. E. BALLENTINE**

# **MEDICAL DIGEST**

NEWS OF INTEREST TO DOCTORS IN TENNESSEE

**PSRO's . . .** AMA will "provide a dominant role of leadership in the implementation of the PSRO program to assure that the best interest of the public and the profession are preserved," as decreed by the AMA House of Delegates in December . . . An Advisory Committee on Professional Standards Review will be created. It will include members of AMA Board and the Council on Medical Service. Other appropriate organizations will be invited to participate. Among responsibilities of the Committee will be: (1) to provide input from the medical profession in the development of rules and regulations which will govern the PSRO program; (2) to assist state medical associations, separately, or in concert with county societies, in developing PSRO's and to recommend structures and operating mechanisms for such organizations; (3) to aid in defining appropriate geographic boundaries for PSRO's, especially where more than one state may be involved. Such a committee will also develop and distribute information about Public Law 92-603 to state associations; monitor the effect of PSRO on medical care, and report to each future House session, and instruct the House and state associations on procedures to follow "whenever rules and regulations interpreting the law and published in the Federal Register seems to be contrary to the spirit of the law as written."

\* \* \*

**WILL PSRO's "STANDARDIZE" MEDICINE? . . .** Since PSRO's is the Federal Government vehicle for continual scrutiny of the services covered by Medicare and Medicaid, "standards" is the key word. Standardizing medical care is one way the Federal Government is going to try and meet what it sees as its obligations to hold down cost and assure quality. The greatest concern to physicians across the country is the possibility that these standards might force them into an undesirable uniformity of practice . . . PSRO's will assume responsibility for comprehensive review of services covered by Medicare and Medicaid programs. Until January 1, 1976 only qualified physician-sponsored organizations can be so designated in the respective districts of each state, as defined by the Secretary of HEW . . . Priority will be given to qualified physician organizations first, but if they do not qualify or assume the responsibility, HEW may designate another organization as the PSRO for the area.

\* \* \*

**NO HEALTH CRISIS . . .** The United States is not suffering the effects of a "health crisis," but, has in fact, made "enormous progress in improving the health of the American people since 1950," according to Harry Schwartz, author of a new book entitled "The Case for American



**LEGISLATIVE COMMITTEE SPONSORS CONFERENCE . . .** The TMA Legislative Committee sponsored a one-day Legislative Conference in Nashville February 4, 1973. The meeting attracted more than 100 contact doctors, Auxiliarians and interested physicians from across the state. Governor Dunn, Lieutenant Governor Wilder and Speaker of the House Ned McWherter appeared on the program. In addition, Commissioner of Public Health, Dr. Eugene Fowinkle, and Commissioner of Mental Health, Dr. Richard Treadway, appeared on the program. Mr. James W. Foristel, Assistant Director of Congressional Relations for AMA in Washington, spoke on National Health Legislation. Congressman John Duncan of Tennessee's 2nd Congressional District and a member of the House Ways and Means Committee was the luncheon speaker. Dr. Rex Kenyon of Oklahoma City, a member of the American Medical Political Action Committee Board of Directors, was a participant. Dr. Robert L. Bomar of Nashville is chairman of the TMA Legislative Committee.

\* \* \*

**MEDICARE AMENDMENTS OF IMPORTANCE TO PHYSICIANS . . .** The Equitable Life Assurance Society, Medicare fiscal intermediary in Tennessee, calls attention to a recent change in the Medicare Law that increases the Part B Medicare deductible from \$50 to \$60. The \$10 increase became effective January 1, 1973. All Medicare beneficiaries were notified of the increase when they received their monthly benefit checks from the Social Security Administration. Because many beneficiaries may direct questions regarding the deductible to their physicians, this is important information for office workers and staff.

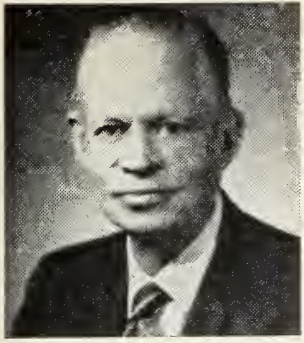
Equitable reminds that it is most important to note that covered expenses incurred during the last three months of 1972 that are used to satisfy the deductible for 1972 may be carried over to satisfy the deductible for 1973. Only those amounts used to satisfy the deductible can be carried over. Patients may be confused by this carry-over provision now that the amount of the deductible has increased \$10.00. There may be situations where \$50.00 in covered expenses incurred during the last three months of 1972 were used to satisfy the 1972 deductible and were applied toward the 1973 deductible. In 1973, an additional \$10.00 would still have to be applied toward the deductible for that year.

For your convenience we are including an illustration of four possible situations showing the effect of the carry-over provision.

CHARGES INCURRED 1972		CARRY-OVER DEDUCTIBLE PROVISION	DEDUCTIBLE 1973
JAN.-SEPT.	OCT.-DEC.		
\$150.00	\$100.00	None	\$ 60.00
None	\$150.00	\$ 50.00	\$ 10.00
\$ 25.00	\$ 15.00	\$ 15.00	\$ 45.00
\$ 30.00	\$125.00	\$ 20.00	\$ 40.00

Any inquiries regarding the Part B Medicare Program should be directed to the Equitable Life Assurance Society's office, located in Nashville. The mailing address is P. O. Box 1465, Nashville, 37202. Telephone: 615/244-5600.





WM. T. SATTERFIELD

## president's page

### *The Annual Meeting*

The Annual Meeting of TMA is an important event. At this event, in addition to scientific and social benefits, the ruling body, the House of Delegates, makes policies and regulations that govern the Association. Perhaps we should take a look at what goes into our Annual Meeting.

Planning begins four to five years in advance. Meeting places, lodgings, exhibit locations and banquet facilities must be secured. Speakers are usually committed months in advance. Many trips are made to the meeting site during the year before the dates arrive.

Three or four days preliminary to the gathering, at least one rented truck and several staff members' private automobiles are loaded at the headquarters offices and typewriters, copying machines, and reams of printed paper are transported. There is a master plan—a step-by-step detailed plan—that must not be deviated from. The plan has options of change, in cases of emergency, and every item, down to pencils labeled "Tennessee Medical Association," are accounted for.

Who does all this so efficiently? Our Executive Staff consists of "pros." Many years of experience result in one of the most efficiently run Annual Meetings in the country. The Staff has help from dedicated committee members on several standing committees. Among these are Scientific Affairs, which has an important function in scientific program planning. Cooperative specialty groups dovetail their programs. Speakers are procured by the Committees on Religion, Socio-economics, IMPACT, by the Trustees, by the Staff, and by individual members.

The Annual Meeting is the one most important event of TMA's year. It brings members together where they may make rules, elect officers, obtain scientific credits, hear important speakers on important subjects, attend their specialty conferences, and just get better acquainted with their fellow members.

The 1973 Annual Meeting program is complete. The scientific speakers, general and specialty, are well-known and respected. The socio-economic speakers are outstanding and nationally known. Exhibits are superior. TMA members offering resolutions, committee and officer reports, and testimony at Reference Committees make member participation at the Annual Meeting widespread. All members of TMA have the opportunity of expressing their views on any subject.

TMA has been fortunate in having had well organized, efficiently executed Annual Meetings. They are well worth attending!

Sincerely,

*William T. Satterfield*

President

# journal

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FEBRUARY, 1973

# editorials

## The Carrot or the Stick

During the months of November and December, the TMA Committee on Continuing Education in conjunction with the Tennessee Hospital Association and the Tennessee Mid-South and Memphis RMP's, conducted a series of seminars on the Professional Activity Study/Medical Audit Program (PAS/MAP), and while they were reasonably well attended, physicians were for the most part conspicuous by their absence.

Now it is neither the intent nor the desire of your committee, or of any of the other sponsors of the seminars, to try to sell PAS/MAP. The reason for all of our efforts is to try to impress on you, the physicians of Tennessee, the absolute necessity for an education program based on established and documented need. In the first place the Joint Commission on Accreditation requires it. But what should be more to the point is that only in this way can your own

medical community develop its own program to answer its own needs for fulfilling what is the only real reason for continuing medical education (or any medical education at all, for that matter): to alter our practice patterns in a way which will result in better care for our patients. It is what we all continually strive for. PAS/MAP is one tool for accomplishing this.

So much for the carrot. Now for the stick. PSRO's are upon us, and will become more and more a part of our life. Whether we like it or not, somebody is going to be looking over our shoulder, looking at the quality of our medical care. Medical audit committees in hospitals are going to have to be more active. To do all that will be required is going to demand either an incredible amount of physician time or good organization. Properly organized, after the initial effort most of the work can be done by computers and lay personnel.

Regardless of the system, the first order of priority is to establish criteria of good medical practice. These must be established locally, and by physicians. If we abrogate our responsibility here, it will be done for us, and done by committees not necessarily friendly. Problem areas should be attacked first, and a data base is necessary to establish these areas. Standards must be very specific so as not to require medical records personnel to exercise medical judgment in computer input or retrieval.

By establishing criteria and standards, it becomes possible for computers to demonstrate practice patterns and trends of patient care. Rather than having audit committees make embarrassing comparisons by a system of peer review, a physician can compare his own performance against established standards, and if he is assigned a number known only to himself, no one else can make such a comparison. There is then a basis for a rational program of continuing education.

There is an excellent film on Patient Care Appraisal, which has to do with the whole area of standards and criteria, prepared by the Washington State Medical Association, the University of Washington Office of Research in Medical Education, and the Washington/Alaska RMP. We anticipate that this film will be available to you for showing, on request to TMA, possibly at your medical society or hospital staff meeting.

It seems to me we must move ahead in this area as rapidly as possible, and your continuing



education committee stands ready to help you in any way possible. You have a great deal to gain; otherwise your loss could be great.

J.B.T.

## Death on the Highway

The publication of Dr. Francisco's excellent paper on the implied consent law brings into focus two of this country's major health problems: death on the highway and alcoholism. To say that they bear a close relationship is to belabor the obvious, but there are some things about this relationship that bear closer scrutiny.

A popular bit of cynicism says that there are lies, damned lies, and statistics. In order to prevent this being an ascending order of villainy, we must be very careful about how we handle statistics. While it certainly is true that the drinking driver is a deadly menace, and that at least 50% of traffic fatalities involve alcohol, it is probably not true that half of the fatal accidents are caused by drinking drivers. Although Dr. Francisco indicates he has figures which suggest it might be higher than 50%, published results indicate that on the contrary, at least 10% of traffic fatalities involve drinking pedestrians, not drivers, and in a significant number of fatal accidents involving alcohol the responsible party has not been drinking.

I do not wish the preceding paragraph to be in any way misconstrued as suggesting that the problem of the drinking driver is not a serious one. Certainly the implied consent law is a great stride in the right direction. What I wish to do in this editorial is to question Dr. Francisco's statement in the last paragraph of his paper that "without this kind of enforcement [of alcohol control laws] there is no convenient, reliable, or effective means presently available to reduce the annual fatalities occurring on the . . . highways of this state." I certainly agree that this is true insofar as alcohol is the cause. What I wish to point out is that there are other perhaps equally pressing considerations requiring legislation and enforcement.

First, there is the problem of the unsafe vehicle. One need only look out his window onto any street or highway and see automobiles and trucks which should have been sent long ago to the rendering factory. Vehicle inspection is inconvenient and expensive, hence it is not a popular platform for legislators. It is not nearly so inconvenient as being killed, nor as expensive as weeks or months in a hospital.

Licensing laws are archaic, largely ineffective,

and poorly enforced, again largely because to do the job right would be expensive and inconvenient. It is simply not reasonable to grant a license to drive at age 16 (or younger) and have it be valid for life, regardless of the deterioration of the physical or mental status of the individual. Too often licenses are granted (to the very young or to the infirm) because of "hardship," without considering responsibility to the community. This is a widely abused facet of the licensing law. Perhaps some thought should be given as to where individuals may drive—the granting of limited licenses. It requires all the alacrity anyone can muster, as well as a responsive, safe (inspected) vehicle, plus emotional and physical stability, to drive on the interstate system, where any accident is likely, because of the speeds involved, to be fatal. Any abridgement of driving privileges should be rigidly enforced—as should suspension of licensure. This is widely ignored at present, because enforcement requires roadblocks, again expensive and inconvenient.

The matter of impairment of reflexes and judgment needs to be expanded on, too. A 0.10% alcohol blood level may be an all-round average figure as to what constitutes being "under the influence" of alcohol. We all know people, though, who "can't hold their likker"—sniff the cork, and blotto! Often just as dangerous are the drivers who are emotionally disturbed, who are taking other drugs, who are thinking of business deals or family troubles, or who are just plain tired and sleepy. These last are often in a hurry and "pushing it," and fail to stop for rest and a cup of coffee. They may push on into eternity, often carrying others with them. The only safe (and responsible) attitude is not to drive under any of these circumstances, especially when drinking, which can compound the rest.

Talking with passengers can constitute a serious hazard, and one of the greatest of this type hazard is "car pools" with young children, who often engage in horse play, which can completely distract the driver.

Finally, and most importantly, there is the matter of individual responsibility. This cannot be legislated, but comes by example, and involves respect for law and a recognition of and respect for the rights of others. As defined by law in this state, the driving of an automobile is, in spite of much popular opinion to the contrary, a privilege, not a right. There is no room for



rugged individualism on the highways, especially when it involves hurtling a two ton projectile down a narrow concrete strip at speeds (often in violation of the law) of up to 100 miles per hour. We need to begin to teach this early to our children, not only by words, but by example.

Any effort to reduce the highway traffic toll will be costly in time and money, and therefore unpopular. It seems to me that as physicians we play a crucial role, because we see every day the waste and the tremendous expense to the community, to individuals and to families in personal anguish, loss of life, and loss of productivity. It is up to us to be sure the community has a clear view of this cost, and of the possible, nay imperative, remedial efforts, the cost of which is by comparison insignificant.

J.B.T.

### The Cooper Quiz

A couple of months back, when we began running "The Cooper Quiz" in the JOURNAL, I asked for a reader response to it—whether you found it helpful, and wished it to be continued. While the response has been 100% favorable, it has not been exactly overwhelming.

This lack of response can be interpreted in one of three ways: 1) There is no wide support for such a feature; 2) few people want to take the time to write letters; or, 3), few people read the editorial pages, and consequently the request was lost on the majority. I hope it was for one of the latter reasons that I received so little response; vanity makes me prefer reason number 2).

It is your editor's desire to give the readership what it wants. Any response to the question of a self-evaluation quiz will be appreciated.

J.B.T.

### ERRATUM

"THE COOPER QUIZ" (January, 1973 Issue) Source of Answers: To Questions 1-15, JAMA; to Questions 16-23, Archives of Internal Medicine; to Questions 24-32, New England Journal of Medicine, July, 1972.



ABERCROMBIE, EUGENE, Knoxville, died December 3, 1972, age 79. Graduate of Vanderbilt University

School of Medicine, 1916. Member of the Knoxville Academy of Medicine.

CROSS, WILLIAM R., Knoxville, died December 22, 1972, age 79. Graduate of Lincoln Memorial University, 1916. Member of the Knoxville Academy of Medicine.

MILLER, CLEO, Nashville, died January 7, 1973, age 70. Graduate of Vanderbilt University School of Medicine, 1927. Member of the Nashville Academy of Medicine.

REIFF, ROBERT, Elizabethton, died January 1, 1973, age 58. Graduate of University of Tennessee College of Medicine, 1949. Member of the Washington-Carter-Unicoi County Medical Association.

SANDERS, LUCIUS CARL, Memphis, died December 28, 1972, age 81. Graduate of University of Maryland, 1915. Member of the Memphis-Shelby County Medical Society.

TUCKER, HARLIN, Nashville, died December 10, 1972, age 83. Graduate of Vanderbilt University School of Medicine, 1912. Member of the Nashville Academy of Medicine.

## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### MAURY COUNTY MEDICAL SOCIETY

Harold W. Ferrell, M.D., Columbia  
Harold H. Fry, Jr., M.D., Columbia  
John Richard Olson, M.D., Columbia  
Thomas R. White, M.D., Columbia

### WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Richard Carver, M.D., Johnson City  
Jerry L. Gastineau, M.D., Elizabethton  
Charles S. Wassum, M.D., Johnson City

## programs and news of medical societies

### Nashville Academy of Medicine

U.S. Representative Richard Fulton was the featured speaker at the November 14 meeting. He reported on medical and health legislation and other Federal programs.

New Officers installed at the January 9 meeting included Dr. Frank Womack, President; Dr. George Holcomb, President-Elect; and Dr. Fred Rowe, Secretary-Treasurer. Dr. Robert Bomar and Dr. James W. Hays were elected to three-year terms on the Board of Directors and Dr. Gordon Peerman was elected Board Chairman.

### Knoxville Academy of Medicine

The Academy met January 9 at the KAM Building Auditorium. The featured speaker was AMA past president Dr. Edward R. Annis, who spoke on such



timely items as Professional Standards Review Organization, Medical Foundations, National Health Insurance, HMO's and AMPAC. The Academy invited members from a joint medical society to attend the meeting and to hold their monthly meetings in the KAM Building if they so desire.

The Academy mourned the passing of Drs. Karl T. Sammons, David Hawkins, Harry Jenkins, and Eugene Abercrombie.

### **Memphis-Shelby County Medical Society**

At its 84th Annual Meeting on December 12, officers for 1973 were installed. They included Dr. John B. Dorian, President; Dr. W. D. Dunavant, President-Elect; Dr. Wilford H. Gragg, Jr., Vice-President; Dr. John L. McGee, Jr., Secretary; Dr. Howard A. Boone, Treasurer; and Dr. Hugh Francis, Jr., Member-at-Large.

## **national news**

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

New faces will be leading the nation's major governmental health programs in President Nixon's second term in office.

At the helm of the Department of Health, Education and Welfare will be a new kind of secretary, a man with a reputation as a budget slasher with a zeal for protecting the taxpayers' dollar.

Caspar Weinberger will be the first HEW secretary schooled in the money world of fiscal prudence. Nicknamed "Cap the Knife," the appointment of Weinberger to run the government's social welfare, health and educational programs perhaps marks the President's most daring cabinet decision.

Selection of the 55-year-old California lawyer seems to be proof of the President's intention to reverse the tide of heavier federal welfare spending, to channel more money and responsibilities to states and localities, and to steer away from the European welfare state concept.

Weinberger will be moving over to HEW from the post of director of the White House Office of Budget and Management, a cabinet post but one where Weinberger was able to function in the comparative anonymity he has preferred to date. At HEW he will be thrust into the limelight and in short time will become one of the best known public figures in the nation.

Despite its reputation as a wrecker of reputations, the HEW Department secretaryship has

served most of its occupants well. Outgoing Secretary Elliot Richardson was elevated to the more powerful and prestigious post of defense secretary. Abraham Ribicoff, who despaired of presiding over the "can of worms" at HEW, found his tenure there no handicap in his race for the Senate.

Ribicoff will be one of the senators present at the Senate Finance Committee confirmation hearing in January on Weinberger's nomination. The confrontation between Ribicoff and Weinberger promises to be an interesting exchange as Weinberger outlines his views on his new position and Ribicoff contributes his advice.

Few fireworks are expected at the confirmation hearing. No committee on Capitol Hill is more conscious of the waste and duplication at HEW than Senate Finance which has a membership considerably more conservative than the Senate as a whole.

Weinberger undoubtedly will give a good picture of his general views and philosophies during his appearance. If he follows tradition, a more detailed explication will be made at a news conference after he is confirmed and sworn in as HEW Secretary.

Weinberger is no stranger to the operations of HEW. At the Budget Office he became well acquainted with the finances of HEW and indeed in tandem with the White House exerted extraordinary fiscal powers over federal health programs.

Weinberger's appointment may end a chafing dichotomy between the White House staff and the White House OMB on the one hand and HEW on the other. As a loyal Administration servant, Richardson was willing to put up with the situation while it lasted but it is doubtful he would have remained compliant much longer.

There's little question that Weinberger is going to propose HEW cuts that will enrage some congressmen, but on the whole the expectation here is that he won't be easily categorized except perhaps as a pragmatist.

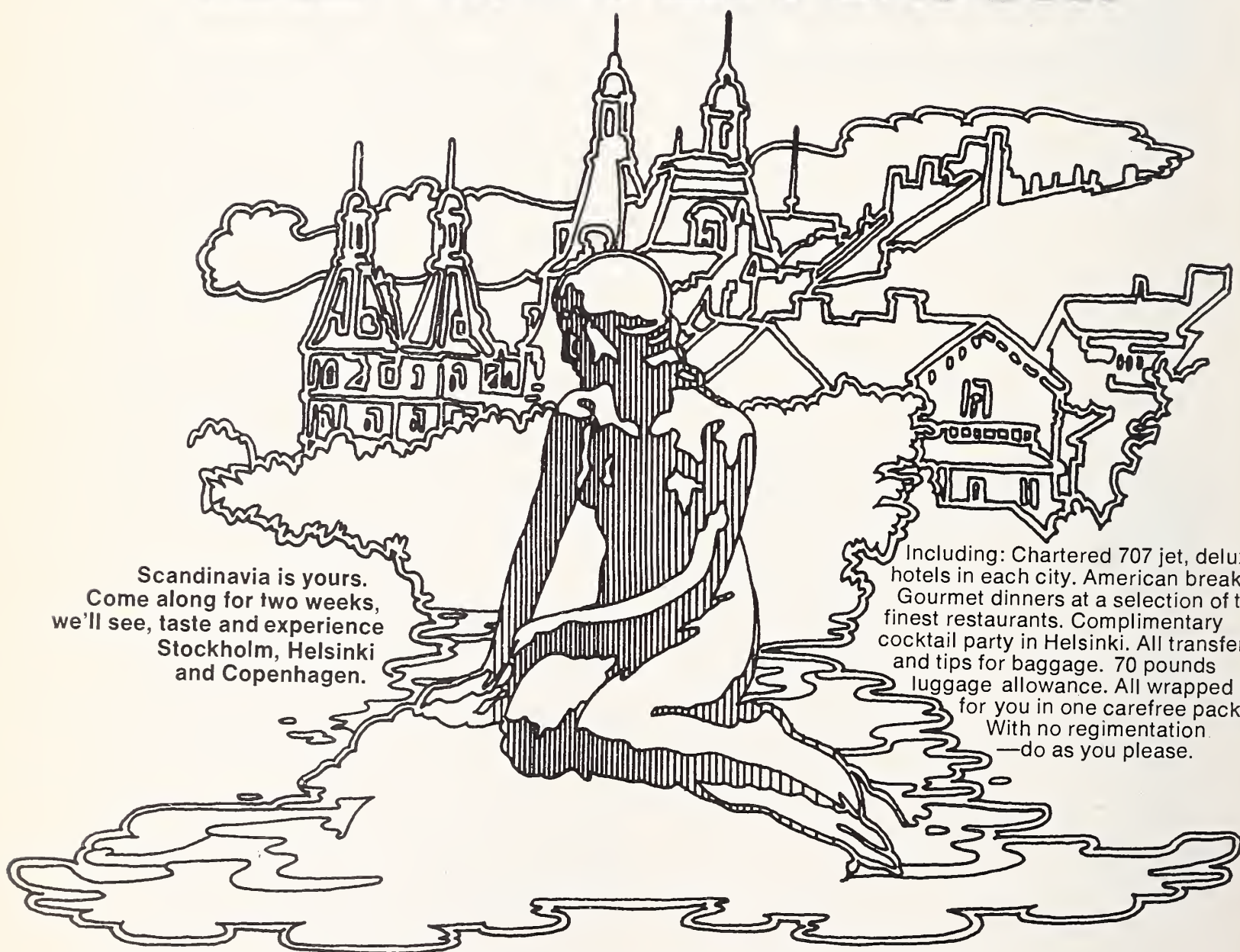
He has noted for example, that more than 71 per cent of federal expenditures are for things over which the Administration has no control—such items as interest on the national debt, Medicare, and veterans compensation.

\* \* \*

John G. Veneman, the number two man at HEW, has also announced his resignation,



**OUR SCANDINAVIAN ADVENTURE  
IS SWEDEN, FINLAND AND  
DENMARK, A PRIVATE 707 JET,  
DELUXE HOTELS, SIDEWALK CAFES,  
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AND DANISH SMORGASBORD,  
GEORG JENSEN SILVER,  
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presumably with an eye to running for lieutenant governor of California.

Veneman was a frequent spokesman for HEW before the Congress before he became under secretary of Health, Education and Welfare in 1969 at the request of then-HEW Secretary Robert H. Finch.

Frank C. Carlucci, the former director of the Office of Economic Opportunity who now is deputy budget director is in line to replace Veneman. Carlucci was number two man in the Office of Management and Budget to Caspar Weinberger.

Carlucci's place in the Office of Management and Budget will be taken by Fred Malek, the Nixon Administration troubleshooter who now heads recruiting efforts in the reshuffle taking place before the President's second term.

\* \* \*

Also departing from the command line-up at HEW are Assistant Secretary for Health and Scientific Affairs, Merlin DuVal, M.D., and Vernon Wilson, M.D., chief of Health Services and Mental Health Administration, the largest operating branch of HEW.

Dr. DuVal, whose resignation comes 16 months after his appointment, returns to the University of Arizona where he will be vice-president for medical affairs. Dr. Wilson returns to the University of Missouri Medical School after guiding HSMHA since May, 1970.

Dr. DuVal believes that the administration of health programs have been tightened and control over the various health agencies strengthened during his tenure. He gives HEW Secretary Elliot Richardson credit for moving in this direction, though he helped institute much of the change. DuVal also significantly broadened HEW's health liaison with other federal departments.

Dr. Wilson carried out a sweeping reorganization of HSMHA, focusing management in his office and among his deputies. He was given high marks for bringing order out of an amorphous spread of agencies.

In neither case were the resignations of DuVal and Wilson the result of any pressure from above. The Administration wanted both physicians to stay on.

The departures of DuVal and Wilson will give new HEW Secretary Caspar Weinberger two important health slots to fill. These slots in all likelihood will not be filled until after new HEW Secretary Caspar Weinberger is

confirmed by the Senate and sworn into office, probably in January.

\* \* \*

The firing of Robert Q. Marston, M.D., Director of the National Institutes of Health and the only top holdover from the Johnson Administration, prompted some angry reaction from Congress and stunned surprise from the medical academic community. No reason was given for the President's acceptance of Dr. Marston's pro-forma resignation.

Rep. Paul Rogers (D-Fla.), head of the House Health Subcommittee, commenting on the Marston firing, said "every top health administrator now has either resigned or been relieved. This latest announcement precludes any hope of continuity in the health field on the federal level with more than a dozen pieces of health legislation coming up."

Dr. Marston had built strong ties with Congress and the academic research community since he succeeded James Shannon, M.D., at NIH in 1968. NIH's appropriations rose to \$2.1 billion with broad new programs on cancer and heart research added in the past two years.

John Twiname, Administrator of HEW's Social Rehabilitation Service (Medicaid), also had his pro-forma resignation accepted by the President.

\* \* \*

There was no great surprise, however, when the White House announced the resignation of Jesse Steinfeld, M.D., as Surgeon General of the Public Health Service.

The 45-year-old Dr. Steinfeld, a career PHS officer who has held the Surgeon General's post since 1969, may be the last man to fill the position. The Administration has made clear its intent to abolish the PHS's Commissioned Corps. In the past several years the Surgeon General has been divested of most of his authority, and the hopes of the PHS Commissioned Corps that it might be revived have faded.

With the massive resignations and firings, only Charles Edwards, M.D., Food and Drug Administration Commissioner, now remains of the old guard.

\* \* \*

After 16 months of deliberation marred with dissension, a federal advisory commission has decided not to recommend any single solution to the problem of medical malpractice insurance. The gist of the divided commission's



report to HEW is to explore a variety of ways to modify malpractice laws at the state level.

Nothing that will be submitted in the commission's final report to the HEW secretary by the first of the year apparently would have much effect on the rising costs of malpractice insurance, the growing number of claims, and the resulting impact on physician's fees.

Any hopes that some sort of a consensus might be attained in the year and half since the commission's formation were dashed at its final meeting when members aired their disagreements over various aspects of the report.

The clash for the most part involved spokesmen for physicians and insurance companies on the one hand, and lawyers' groups and consumer organizations on the other. A strong minority report was expected challenging the brunt of the final findings.

The report by the 21-member committee is strictly advisory. The HEW secretary is not required to make any legislative proposals on the basis of it. Unless HEW has some legislative recommendations in the works, it appears doubtful the Administration will seek any changes in malpractice statutes as part of its legislative health package this year.

One of the more controversial findings of the commission was the suggestion that the contingent fee system actually hinders litigants with small malpractice claims and a suggestion that there should be public legal assistance for those with small claims. The report did not recommend abolishment of the contingent fee system.

Carl A. Hoffman, M.D., AMA President and a member of the commission, has submitted to the commission some forty pages of comments that address themselves to a number of shortcomings contained in the report.

\* \* \*

The director of the Federal Drug Administration's Bureau of Drugs has charged before a Senate subcommittee that physicians are overprescribing antibiotics, resulting in an increased number of "resistant strains of bacteria and an increased number of superinfections."

"There may be 100 to 300 thousand cases each year of blood poisoning from superinfections, of which 30 to 50 per cent are fatal," according to testimony before the Senate Small Business' Subcommittee on Monopoly by Henry E. Simmons, M.D.

Harry F. Dowling, M.D., emeritus professor

of medicine, University of Illinois, said "it is doubtful the average person has an illness that requires treatment with an antibiotic more often than once every five or ten years." Antibiotic production has needlessly increased, however, in the past ten years, he said.

The physician's fear of failure to help his patients—stronger than his fear of complications—motivates him to prescribe antibiotics, suggested Calvin M. Kunin, M.D., of the University of Wisconsin School of Medicine.

\* \* \*

More than 1300 persons died from narcotics abuse in New York City in 1972, that city's chief deputy medical examiner told a conference on the "Medical Complications of Drug Abuse" sponsored in Washington by the AMA's Committee on Alcoholism and Drug Dependence.

Michael M. Baden, M.D., said that heroin addiction has become the leading cause of death among persons between the ages of 15 and 35 in New York. At the same time, more than 30 per cent of narcotic deaths in the city have been associated with methodone use—both legal and illegal, Dr. Baden said.

White House physician William M. Lukash, M.D., served as coordinator of the all-day conference that attracted more than 500 physicians to the nation's capital to hear leading drug experts describe the problems involving addicts.

Dr. Baden told the conference that during the past decade, the growing abuse of drugs has been reflected by a "marked increase" in narcotic deaths (from 109 in 1960), a decrease in the median age of death from 31 in 1960 to 23 today, and a change in the pattern of drug abuse from heroin alone to multiple drugs, most recently methodone.

"The drug addict seen today in the emergency room for an 'overdose' cannot be presumed to have taken only heroin—or heroin at all," Dr. Baden told the conference. "We see too many addicts at autopsy who were sent home after 'responding' to an injection of nalorphine and died shortly thereafter because methodone or barbiturates had also been taken.

J. Willis Hurst, M.D., recent past president of the American Heart Association, told the conference that a preliminary survey indicates that drug abusers' contaminated needles are



now one of the leading causes of bacterial endocarditis in the nation.

A panel of specialists on the liver disclosed that the amount of hepatitis associated with drug abuse is still rising but that many drug users display no symptoms of the disease and thus are able to sell their diseased blood to collection centers.

\* \* \*

Methodone will be distributed only through hospital pharmacies, approved maintenance programs, and certain drug stores in rural areas, under newly tightened regulations announced by the Food and Drug Administration.

Effective immediately, FDA is requiring patients to have been addicted to heroin at least two years before participating in a methodone-maintenance program. Enrollment of minors will be limited.

Patients 16 to 18 may remain in current programs, FDA said, but no additional minors may be admitted unless a consent form is signed by a parent, legal guardian, or a state-designated authority.

The new rules require patients of treatment centers to take the drug daily at the center, under observation, for the first three months. If they show satisfactory progress, they will be allowed to take home two-day supplies, and after two years, three-day supplies.

The new restrictions are necessary to curb "a growing problem of abuse and diversion of methodone, said FDA.

While announcing the unique closed system of methodone distribution, FDA also said methodone marketing permits of eight drug companies will be revoked.

"It is not in the public interest, either to withhold the drug from the market until it has been proved safe and effective under all conditions," said FDA Commissioner Charles C. Edwards, M.D., "or to grant full approval for unrestricted distribution, prescription, dispensing or administration of methodone."

**medical news  
in tennessee**

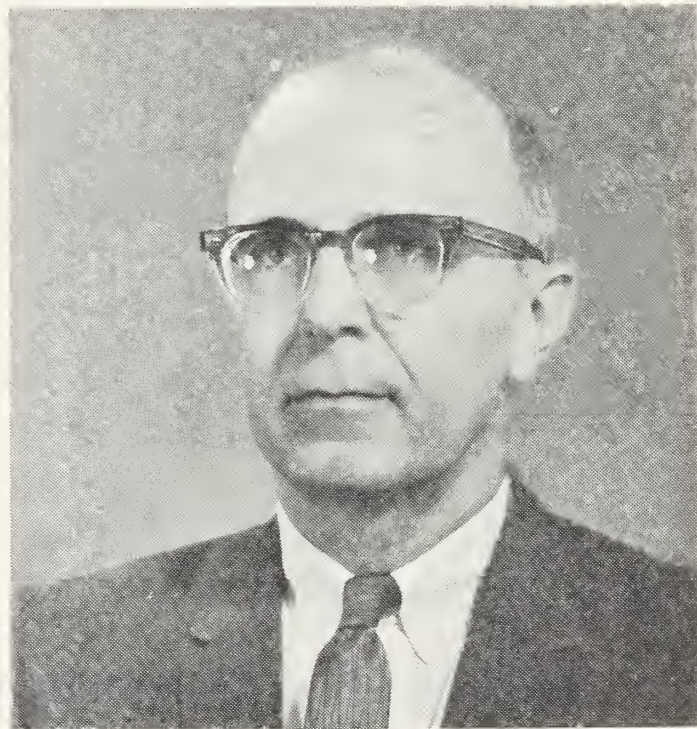
**Westenberger Named to Nashville Academy of Medicine Position**

John M. Westenberger has been named Executive Director of the Nashville Academy of

Medicine & Davidson County Medical Society. He succeeds Jack Drury, the Academy's executive since 1954, who will continue to serve on a part-time basis to organize and activate the Davidson County Foundation for Medical Care, a medical and hospital service project under development by the Academy.



WESTENBERGER



DRURY

Westenberger, 32, assumes the executive post after two years as Executive Assistant and Field Representative with the Tennessee Medical Association. He previously was the Director of



Development and Public Relations at Tennessee Wesleyan College in Athens and a photo-journalist with the U.S. Naval Pacific Fleet Combat Camera Group.

A graduate of Birmingham-Southern College, Westenberger is an accredited member of the Public Relations Society of America, Middle Tennessee Chapter, chairman of the local Birmingham-Southern alumni chapter, and a member of the administrative board of Belle Meade United Methodist Church. He is listed in the 1969 edition of Outstanding Young Men of America, U.S. Jaycees.

Drury, prior to joining the Academy staff, was a member of the Nashville Banner's editorial staff for 18 years serving as City Editor from 1942 to 1954. In 1938 he received a national award for a series of newspaper articles on traffic safety.

Active in community affairs, he is a member and former board member of the Exchange Club of Nashville, a board member of the Bill Wilkerson Hearing & Speech Center and the Nashville Eye Bank, and on the Blood Recruitment Committee of the Red Cross Blood Center where he is a 9-gallon donor.

The Nashville Academy of Medicine is composed of about 700 members representing 35 fields of practice and including attending physicians at 17 hospitals and faculty members at Nashville's two medical schools.

### **John R. Coles Named To TMA Executive Staff**

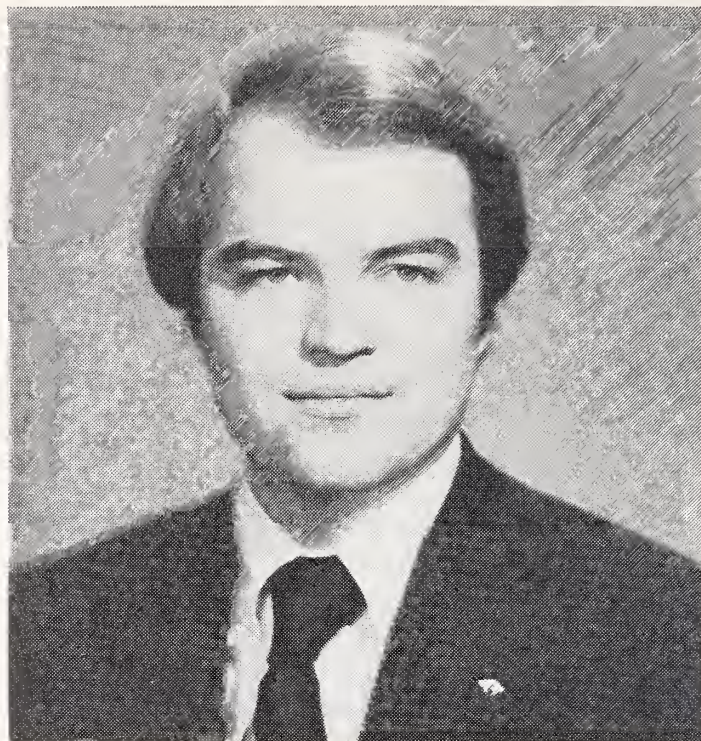
John R. Coles has been appointed Executive Assistant for Legislation, according to Jack E. Ballentine, Executive Director of TMA.

Coles will serve TMA physician members and state legislators by assisting in the administration of the Association's legislative program. Also, he will staff several TMA committees including the Liaison Committee to the State Department of Public Health.

Coles, 27, comes to TMA from GENESCO where he served as Assistant Manager of the Military and Commercial Footwear Export division. He is a 32-degree Scottish Rite Mason and Shriner, and a member of the Masonic Lodge Observance 686, Nashville Area Junior Chamber of Commerce, and Harpeth Presbyterian Church.

A graduate of Columbia Military Academy and Belmont College, Coles is married to the

former Charlotte White of Franklin and resides at 1933 Rosewood Valley Drive in Brentwood.



COLES

## **personal news**

DR. T. K. BALLARD, Jackson, has been elected chairman of the Tennessee Public Health Council, the major policy body for the State Department of Public Health. Dr. Ballard succeeds DR. J. KELLEY AVERY of Union City.

DRS. LLOYD T. BROWN, Gallatin, and PAUL L. JOURDAN, Knoxville, have been elected active members in the American Academy of Family Physicians.

DR. HUGH DON CRIPPS, Smithville, has been elected to the Board of Directors of the First National Bank of Smithville.

DR. THOMAS A. CURREY, Memphis, has assumed the presidency of the St. Joseph Hospital Medical staff in Memphis. He succeeds DR. PAUL WILLIAMS as President.

DR. OLIVER DeLOZIER, Knoxville, has been elected president of the Knoxville Academy of Surgery succeeding DR. ABNER GLOVER. Others elected were DR. CHARLES SMELTZER, vice-president, and DR. HUGH A. BLAKE, secretary-treasurer.

DR. JOHN B. DORIAN, Memphis, was installed as President of the Memphis and Shelby County Medical Society at its 84th Annual Meeting on December 12.

DR. LLOYD C. ELAM, Nashville, has been named Vice-Chairman of the State Comprehensive Health Planning Council. Dr. Elam also serves as Chairman of the Tennessee Rhodes Scholarship Selection Committee.



DR. TAYLOR FARRAR, Shelbyville, has accepted a position with the State Department of Public Health effective January 1, 1973.

DR. JAMES H. FLEMING, Nashville, serves as President and chairman of the executive committee of Nashville's newest hospital, West Side Hospital.

DR. EUGENE W. FOWINKLE, Nashville, Tennessee Commissioner of Public Health, was the speaker at the University of Tennessee Medical Units graduation in December.

DR. JERRY FRANCISCO, Memphis, Shelby County and State Medical Examiner, has received a grant from Memphis Regional Medical Program to engage in the gathering and analysis of death statistics.

DR. C. J. HARKRADER, JR., Bristol, has announced his candidacy for city council from district number two.

DR. ALLYN M. LAY, Mt. Pleasant, who has practiced medicine there for the past ten years, has left to enter specialty training.

DR. JACK M. MOBLEY, Knoxville, has been elected chief of staff of the Presbyterian Hospital. He succeeds DR. MARK FECHER.

DR. H. A. MORGAN, JR., Lewisburg, director of the South Central Region of the Tennessee Department of Public Health, resigned that position effective November 15.

DR. HENRY PACKER, Memphis, chairman of preventive medicine at University of Tennessee Medical Units retired effective December 31.

DR. JAMES W. PATE, Memphis, head of the thoracic surgery at the University of Tennessee Medical Units has been installed as president of the Southern Thoracic Surgical Association.

DR. K. J. PHELPS, Lewisburg, has been elected Chief of Staff of the Consolidated Lewisburg Community Hospital Medical Staff.

DR. JOHN PURVIS, Concord, suffered head cuts and leg injury in an automobile accident on December 22.

DR. ROBERT E. RICHIE, Vanderbilt Medical School, Nashville, recently demonstrated the preservation of the kidney in preparation for transplantation during "Operation Heartbeat-Science Explorers Day" held in Nashville.

DR. EARL E. ROLES, JR., Tullahoma, has been elected Chief of the Harton Hospital medical staff.

DR. FENTON SCRUGGS, Cleveland, has announced that seven physicians would be moving in 1973 to Cleveland to practice as a result of a concentrated recruiting program.

DR. CURTIS SEXTON, Lake City, recently participated in local ceremonies at McGhee Tyson Air Base. Dr. Sexton is one of the groups' physicians.

DR. ALEX B. SHIPLEY, Knoxville, Regional Health Director, has announced a series of venereal disease clinics to be held in Cocke County at the Cocke County Health Department in an effort to curb the upswing in venereal diseases which is spreading to rural as well as urban areas.

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DR. CHARLES A. TRAHERN, Clarksville, appeared on the program of an AMA sponsored Rural Health Workshop held in Atlanta on January 11.

DR. C. RICHARD TREADWAY, Nashville, Commissioner of Mental Health, and DR. WILLIAM H. TRAGLE, Nashville, Central State Superintendent, have announced a second drug and alcohol rehabilitation center at Central State Hospital in Nashville.

DR. JULIAN K. WELCH, Brownsville, and DR. JOAN BRUCE WOODS, Oak Ridge, have been named recipients of the 1972 Physicians Recognition Award by the American Medical Association.

DR. NAT T. WINSTON, Nashville, recently spoke at a Kiwanis Luncheon held at the Sheraton-Peabody in Memphis. He also spoke at a recent meeting of the National Association of Accountants at the Read House in Chattanooga.

DR. GEORGE A. ZIRKLE, JR., Knoxville, has been re-elected Secretary of the Tennessee Public Health Council.

## announcements

### CALENDAR OF MEETINGS

#### STATE

April 11-14 Tennessee Medical Association, Annual Meeting, Sheraton-Peabody Hotel, Memphis

#### NATIONAL

March 29-30 AMA National Conference on Rural Health, 26th, Statler-Hilton, Dallas  
April 1-4 American College of Surgeons, Spring Meeting, Hilton and Americana Hotels, New York

April 2-7

April 3-5

April 6-8

April 9-12

April 9-13

April 16-18

April 16-19

April 23-28

April 25-27

May 2-5

May 11-12

May 13-17

May 16-20

May 21-24

May 21-24

American College of Radiology, St. Francis Hotel, San Francisco

American Academy of Facial Plastic and Reconstructive Surgery, Chase Park Plaza Hotel, St. Louis

American Society of Internal Medicine, Palmer House, Chicago

American Academy of Pediatrics, Spring Session, Sheraton-Boston Hotel, Boston

American College of Physicians, Conrad Hilton, Chicago

American Association for Thoracic Surgery, Fairmont Hotel, Dallas

American Association of Neurological Surgeons, Century Plaza Hotel, Los Angeles

American Academy of Neurology, Sheraton-Boston Hotel, Boston

American Surgical Association, Century-Plaza Hotel, Los Angeles

American Gynecological Society, Broadmoor Hotel, Colorado Springs

American Association of Clinical Urologists, New York Hilton Hotel, New York

American Urological Association, New York Hilton Hotel, New York

American Pediatric Society, Hilton Hotel, San Francisco

American College of Obstetricians and Gynecologists, Americana Hotel, Bal Harbour, Fla.

American Thoracic Society, Statler Hilton Hotel, New York



## continuing education opportunities

### University of Tennessee CME Courses

The following continuing education courses are being offered by the University of Tennessee College of Medicine during 1973:

Date:	Course:
March 5-9	Fundamentals of Otolaryngology
March 17-18	Pediatric Anesthesia
March 26-31	General Review Course for the Family Physician
April 2-3	A Clinical Approach to Common Skin Problems
April 12-13	Conference on the Exceptional Child

May 9-11

May 9-12

May 14-18

May 20-23

Pulmonary Disease

Clinical Electrocardiography (Paris Landing State Park Inn, Buchanan, Tennessee)

Intensive Review of the Science of Anesthesiology

Basic Principles of Rhinoplasty

### Vanderbilt University CME Courses

Date	Title, Location, Program Coordinator
March 8	Death and Dying, Location to be announced, Mr. Robert Reber



- March 16-17 Renal Insufficiency, University Club of Nashville, Earl Ginn, M.D.
- March 23-24 2nd Annual Dragstedt Surgery Symposium, Underwood Auditorium, Vanderbilt, John Foster, M.D.
- April 4-6 Critical Care, (co-sponsor, American College of Physicians), Underwood Auditorium, Vanderbilt, Ms. Norma Shephard
- April 27-28 Pros and Cons of Group Practice, (Organization Alternatives in Medical Practice), University Club of Nashville, Paul Slaton, M.D.
- May 23-24 13th Annual Seminar in Psychiatry, Location to be announced, Vergil Metts, M.D.
- July 11-12 Ky. Med. Assn., Annual Meeting Lake Barkley, Kentucky
- Sept. 19-21 Endocrinology (American College of Physicians) Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.
- Sept. 26-28 The Injured Child (American Academy of Orthopedic Surgeons) Underwood Auditorium, Vanderbilt, John Connolly, M.D.
- Oct. 10-12 Hypertension (American College of Cardiology) Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.
- Oct. 25-27 Child Neurology Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

## ACP Regional Meetings and Postgraduate Courses

### 1973 REGIONAL MEETINGS

*Louisiana-Mississippi* Regional Meeting, American College of Physicians, Feb. 23-24, Royal Sonesta Hotel, New Orleans, La. INFO: A. Sheldon Mann, M.D., 1514 Jefferson Highway, New Orleans, La. 70121.

*Missouri* Regional Meeting, American College of Physicians, Feb. 23-24, Ramada Inn, St. Louis, Mo. INFO: Thomas F. Frawley, M.D., St. Louis Univ. Hospital, 1325 South Grand Blvd., St. Louis, Missouri 63104.

*Alabama* Regional Meeting, American College of Physicians, March 2-3, Grand Hotel, Pt. Clear, Alabama. INFO: Alwyn A. Shugerman, M.D., 1815 11th Avenue, Birmingham, Ala. 35205.

*South Carolina* Regional Meeting, American College of Physicians, March 9-10, Matador Motor Inn, Columbia, S. C. INFO: Vince Moseley, M.D., 51 E. Bay, Charleston, S. C. 29401.

*Virginia* Regional Meeting, American College of Physicians, March 16-17, Williamsburg Inn, Williamsburg, Va. INFO: W. Taliaferro Thompson, Jr., M.D., 4602 Sulgrave Rd., Richmond, Va. 23221.

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## 1973 POSTGRADUATE COURSES

These courses are arranged through the cooperation of the directors and the institutions involved. Registrations forms and requests for information are to be directed to: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104. Tuition Fees: ACP Members and Fellows, \$80; Nonmembers, \$125; Associates, \$40; Other Residents and Research Fellows, \$80.

<i>Date</i>	<i>Title and Location</i>
Feb. 26-Mar. 2	CLINICAL GASTROENTEROLOGY, University of Michigan Medical Center, Ann Arbor, Mich.
Mar. 5-8	PROBLEMS OF INTERNATIONAL HEALTH, Naval Dept., San Diego, Calif.
Mar. 5-8	MODERN NEUROLOGICAL DIAGNOSIS AND THERAPY, University of Miami School of Medicine, Miami, Fla.
Mar. 12-16	INFECTIOUS DISEASES, University of Maryland School of Medicine, Baltimore, Md.
Mar. 14-16	CLINICAL PHARMACOLOGY: RATIONAL BASIS OF THERAPEUTICS, Univ. of California School of Medicine, San Francisco, Calif.
Mar. 19-23	FOUR AND ONE-HALF DAYS OF INTERNAL MEDICINE: WHAT'S NEW? University of Alabama School of Medicine, Birmingham, Ala.
Mar. 22-24	CLINICAL RECOGNITION AND MANAGEMENT OF HEART DISEASE—1973, University of Arizona Medical Center, Tucson, Ariz.
Mar. 26-30	CARDIOLOGY — 1973 — TOPICS OF CURRENT INTEREST, Mount Sinai School of Medicine, New York, N.Y.
Apr. 4-6	RECENT ADVANCES IN DIAGNOSIS AND MANAGEMENT OF PULMONARY DISEASE, Virginia Mason Medical Center, Seattle, Wash.
Apr. 24-27	PULMONARY DISEASE, University of Pennsylvania School of Medicine, Philadelphia, Pa.
Apr. 25-27	HEPATOBIILIARY DISEASE IN CLINICAL PRACTICE, University of California, San Francisco, Calif.
Apr. 25-27	ADVANCES IN DIAGNOSIS AND MANAGEMENT OF INFECTIOUS DISEASE, University of Wisconsin, Madison, Wis.
May 16-18	THE RHEUMATIC DISEASES—CLINICAL AND IMMUNOLOGICAL ASPECTS, University of Texas Southwestern Medical School, Dallas, Tex.

May 16-18	CLINICAL AUSCULTATION OF THE HEART, Georgetown University Hospital, Washington, D.C.
May 21-25	INTERNAL MEDICINE: CURRENT CONCEPTS OF CLINICAL PROBLEMS, University of Cincinnati Medical Center, Cincinnati, Ohio.
May 21-25	INTENSIVE CARE UNITS, St. Vincent's Hospital and Medical Center of New York, New York, N.Y.
May 29-June 1	RECENT ADVANCES IN ENDOCRINOLOGY AND THEIR CLINICAL APPLICATIONS, Royal Victoria Hospital, Montreal, Que., Can.
June 4-8	HEMATOLOGY, University of Washington School of Medicine, Seattle, Wash.
June 13-15	ONCOLOGY AND CHEMOTHERAPY, University of Southern California, Los Angeles, Calif.
June 18-22	CLINICAL ASPECTS OF BLOOD TRANSFUSION, Michigan State Univ., East Lansing, Mich.
June 25-29	ADVANCES IN INTERNAL MEDICINE: RECENT PERSPECTIVES, 1973, Banff, Alta., Can.

### Three Days of Cardiology

"Three Days of Cardiology for Physicians" will be held at Shreveport, Louisiana on March 1, 2, and 3, 1973.

The meeting is co-sponsored by the Council of Clinical Cardiology of the American Heart Association, Louisiana State University Medical School—Shreveport, and the Louisiana Heart Association.

The theme of the meeting is "Cardiovascular Emergencies."

### Symposium on Pediatric Radiology

This three-day symposium to be held May 2-4, 1973 will deal with many practical problems in the diagnosis of abdominal, chest, and skeletal disease in childhood. A distinguished guest and University of Kentucky faculty will join in presenting the conference, organized to meet the need of practicing pediatricians and radiologists.

Direct inquiries to: Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.





## from the tennessee department of public health

### Health Data for Decision Making

The Tennessee Department of Public Health is the recipient of a Federal-State-Local Health Statistics System grant which should dramatically improve the collecting and reporting of health statistics in the State. The Department is one of eight agencies throughout the country funded for the first year of this program. The funding will enable the Department to conduct certain special studies. Subjects to be undertaken under the present funding include a *health interview survey*, an *inventory of licensed health manpower* and an *inventory of health facilities*.

The Health Department in Tennessee has a long history of maintaining high quality statistical information. Types of information presently processed include vital statistics; morbidity statistics; data from Crippled Children's Service, immunization programs, indigent hospitalization, hospitals, selected health manpower and disease-specific information for tuberculosis, venereal disease, and accidents. The newly funded statistical project will build upon a firm statistical foundation already established in the state.

#### HEALTH INTERVIEW SURVEY

Designed to meet one of the basic tasks and responsibilities of state and local health agencies, the Health Interview Survey will determine the major health needs of people by communicating directly with them. Many approaches and prolonged periods of time will be needed to determine total health needs, but the health survey is one source of basic information. To identify areas where greatest deficiencies exist, health needs and service patterns will be compared to available manpower and facilities.

Solutions to community health problems in Tennessee will vary by type of problem and regional differences. Thus estimates will be made for the state and five sub-regions of the state. The sub-regions will be:

1. The four counties with cities of 100,000 or more population
2. The 22 counties with cities of 10,000 to 99,999 population

3. Counties without a city of 10,000 population in the eastern portion of the state
4. Counties without a city of 10,000 population in the middle region of the state
5. Counties without a city of 10,000 population in the western portion of the state

In order to make statistically sound estimates, a probability sample of approximately 5,000 households will be selected. Estimating procedures and processing will be conducted so that it will be impossible to identify specific individuals. Types of information to be collected will include the following:

- Age, race and sex of members of the households
- Income and education of heads of households
- Prevalence of medical and psychiatric conditions as identified by the people themselves
- Types of medication or appliances used by the population
- Proportion of the population using tobacco, alcohol, or other substances
- Geographic location of sought medical services
- Types of medical practitioners delivering health services
- Methods of payment for health care
- Regular sources of health services
- Additional types of medical services desired by the population
- Opinions of the respondents on the quality of medical care received by the households

#### HEALTH MANPOWER INVENTORIES

Licensed health manpower is a major resource for the delivery of health services. In order to plan for health services it is necessary to know the characteristics and distribution of this manpower. Limited information is available for professions which are licensed under the Licensing Board for the Healing Arts. These include physicians, dentists, chiropractors, osteopaths, optometrists, dispensing opticians, psychologists, psychological examiners, physical therapists and nursing home administrators. For other licensed health manpower, the types and availability of data vary greatly. Included are veterinarians, water system operators, professional environmentalist, pharmacists, podiatrists, dental hygienists, dental assistants, registered nurses, licensed practical nurses, and laboratory personnel.

The project's manpower staff will develop a system of registration and record keeping ap-



plicable to all licensed health professions. Statistical information on health manpower will be collected as a part of registration, licensing, and renewal procedures. Since this information will be based on licensing records, the rules of confidentiality governing licensing procedures will apply. Tabulations will be made, not only on a statewide basis, but for planning regions and counties.

Types of information maintained will include state and county of practice, race, sex, date of birth, basis for licensing, professional school attended, and specialties within the profession.

### HEALTH FACILITIES INVENTORIES

Health facilities are another major resource for the delivery of health services. Information on health facilities have been collected for many years by the Tennessee Department of Public Health through the Certification and Licensure Division, and by the Health Care Facilities, Survey and Construction Division. During the last few years, this has been a joint project of the Department, the Tennessee Hospital Association, and regional Comprehensive Health Planning agencies.

The purpose of the Facilities Inventory will be to improve the quality of information collected and the timeliness of the information, and to mechanize the processing in order to have statistical information in a more retrievable form. Uniform information will be available to state and local agencies. The information can

also be provided to federal agencies and others. It is hoped that ultimately one collection source may be able to answer questions needed by many agencies.

Types of facilities for which information will be maintained will include hospitals, nursing homes, homes for the aged, rehabilitation facilities, and diagnostic and treatment centers.

Information to be included for the facilities will include identification of the facilities, type of ownership, type of service, accreditations and approvals, services offered in the facilities, capacity of the facility, utilization of facility, summary information on patients receiving services, financial information, and employee information.

### CONCLUSION

The Federal-State-Local Health Statistics Project gives the Tennessee Department of Public Health the opportunity to increase its capacity for collection, processing and analysis of statistical information. It is anticipated that information obtained through the project and other statistical data maintained in the department will enable it to better understand the health needs of the people of Tennessee, and the resources available to meet its needs. Through this understanding, the department will be able to plan for its own services and to give guidance and information to other agencies responsible for meeting the health service needs of Tennessee.

\* \* \*

FAMILY PHYSICIANS, INTERNISTS, GENERAL PRACTITIONERS, ORTHOPEDIC SURGEONS, and OB-GYN needed for various communities throughout Tennessee. All opportunities are located in towns with a modern, fully-equipped, JCAH approved hospital. **Contact: E. J. Ryan, Jr.,** Director-Medical Relations, Hospital Corporation of America, P.O. Box 550, Nashville, Tennessee 37203.

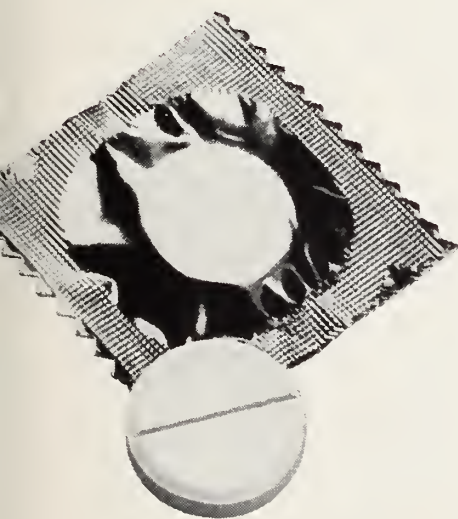
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# A New Dosage Form:

## Chewable Tablets 500 mg Mintezol® THIABENDAZOLE | MSD)



so easy to take  
everyone in the family  
can keep to the  
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.  
**Supplied:** Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD  
MERCK  
SHARP  
DOHME  
addendum

## INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	1/2
50	0.5	1
75	0.75	1 1/2
100	1.0	2
125	1.25	2 1/2
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



## The Emerging Specialty of the Emergency Department Physician

WILLIAM T. HAECK, M.D.\*

The emergency physician is a unique entity in American Medicine. He was created by public demand. During the 50's and 60's increasing public mobility, decreasing availability of family physicians, and increasing demands of the consumer for immediate care led many individuals to begin to seek care in emergency departments. Visits to emergency departments over a 10 year period rose by 300% in some places.

The hospital and the medical staff of the hospital share a joint responsibility to treat any patient who arrives at the hospital emergency department seeking care. The increasing visit load in the emergency department increased the work load of already busy hospital medical staffs. Many staff members also began to feel uneasy about being responsible for complicated cases they might not have seen or treated since the time they started specializing.

Hospitals and their medical staffs developed two generally accepted plans to meet their obligation to treat emergency patients and to free the medical staff to meet all their other obligations. The plans were named for the cities and hospitals where they first evolved.

The Pontiac Plan ensures that there will be a physician on duty in the emergency department 24 hours a day. This physician and his partners (sometimes as many as 40 or 50) maintain their medical practices and agree to be present in the emergency department when assigned there by the group leader.

The Alexandria Plan is a further refinement.

\* Project Director, Emergency Medical Services Section, Division of Health, State of Florida.

It also guarantees the presence of a physician(s) in the department 24 hours daily. In this plan, the physicians in the department limit their practice to emergency medicine and their entire medical practice is limited to the emergency department.

Many physicians are now making careers of emergency medicine. They have obtained special training to give them expertise in resuscitation, wound care, correction of shock, acute heart problems and many acute and common problems of every day medical practice. Their practices involve stabilization of acute problems and initial treatment of non-life-threatening problems and referral of the patient for definitive care. In many instances, the emergency department is now the point where patients enter the health care system.

Many emergency physicians are serving their communities by actively becoming involved in stimulating their communities to upgrade and improve the total emergency medical services system in the community. They are often in the battle lines fighting for improved ambulance services. Many are out in the community teaching the principles of good first aid and cardio-pulmonary resuscitation. They are involved in training ambulance attendants and are involved in the struggle to bring local, state and federal laws up to date to legislate the improved EMS systems this country needs.

The emergency physicians have organized to form the American College of Emergency Physicians. It now has over 3,000 members. University Emergency Department Physicians have organized the University Association for Emergency Medical Services. Both groups are fighting for better emergency care for the American public through better training for emergency physicians, better quality emergency departments and better community emergency medical care systems.

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John M. Howard, M.D., Ed.

AMA Commission on Emergency Medical Services



**Dollars Today—  
—Doctors Tomorrow**

American Medical Association  
Education and Research Foundation

535 North Dearborn Street, Chicago 10, Illinois





# Encounter in Clinical Practice

## Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

## Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

## B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

## Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

## Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

**In nonobstructed cystitis and pyelonephritis due to susceptible organisms**

**Gantanol<sup>®</sup>**  
**(sulfamethoxazole)**  
**Basic Therapy**

plastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age** (except adjunctively with pyrimethamine in congenital toxoplasmosis).

*Usual adult dosage:* 2 Gm (4 tabs or teasps.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

*Usual child's dosage:* 0.5 Gm (1 tab or teasps.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

**Supplied:** Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110



**Answers to the Cooper Quiz**  
**(from pages 130-131)**

THE NEW ENGLAND JOURNAL OF MEDICINE

August 3, 1972

1. (b). "Marihuana smoking by subjects without previous experience causes an increase in limb blood flow concomitantly with the rise in pulse rate. These responses are still evoked after administration of atropine but not after pretreatment with propranolol, a beta-adrenergic blocker. The tachycardias of atropine and of epinephrine are potentiated by marihuana. These findings suggest that the increase in pulse rate and peripheral blood flow induced by cannabis involves beta-adrenergic vascular mechanisms, and counsel caution in the administration of vasoactive drugs and anesthetics for those who may have been smoking marihuana." (p. 209—Abstract)
2. TRUE. "Our findings have several clinical implications. The age group most frequently involved in road traffic accidents is also the one that most commonly smokes marihuana. A persistently high cardiac rate in a patient in an accident, not adequately explained by the clinical situation, might be related to cannabis smoked before the accident. With hind-sight, this hypothesis may explain circulatory disturbance, in a number of accident cases that, at the time, we could not explain. On subsequent questioning, some of these patients admitted to smoking marihuana shortly before the accident. Premedication with atropine or local anesthetic infiltrations containing epinephrine in such patients could enhance and prolong this tachycardia for a dangerously long period." (p. 212)
3. TRUE. "During acute infections resulting in depression of bone-marrow function, the G-6-PD defect might become fully expressed even in a patient with sickle-cell anemia. Thus, these patients are most likely to receive hemolysis-inducing drugs at the time when they are most vulnerable to harm by them. Smits et al, recently reported seven cases of hemolytic crises in patients with sickle-cell anemia, all of which appeared to be caused by infections or drugs triggering hemolysis in G-6-PD-deficient individuals.  
"The importance of diagnosing G-6-PD deficiency in patients with sickle-cell anemia cannot be overemphasized." (p. 215)
4. FALSE. "It was noteworthy that there was less suppression of weight gain for the children on methylphenidate than for those on dextroamphetamine. If, as has been suggested by the results of Connors, these two drugs are equally effective, methylphenidate should be the preferred medication. The inverse relation between weight gain and methylphenidate dose, however, suggests that for the higher dose range, methylphenidate and

dextroamphetamine have equivalent effects on the suppression of weight gain.

"The second set of data for nine children continuously on medication for two or more years indicates that the stimulant-induced suppression of weight gain persists during continued use of medication. There appears to be no tolerance to this suppression of weight gain, although it is still likely that tolerance develops to the initial weight loss that many children evidence after initiation of stimulant medication.

"The effect of long-term ingestion of stimulant drugs on growth in height is more variable than its effect on weight change. It is alarming, however, to note that percentile height changes correlated significantly with percentile weight variations and that percentile height for children continuously on stimulant drugs showed a significant decline as compared to that for hyperactive children not on medication. Nonetheless, because the height percentile changes in the experimental group were not significantly changed from their base-line levels, the effect of stimulant drugs on height remains to be clearly demonstrated." (p. 219)

5. TRUE. "Immunosuppressive therapy has had a dramatic influence on the field of organ transplantation, and today, a dozen years after the discovery of the immunosuppressive properties of the antipurines, the transplantation of kidneys is an accepted and widely practiced form of treatment. By contrast, immunosuppressive agents have thus far failed to revolutionize the treatment of immunologic diseases. Drugs of this type are used in immunologic disorders with the expectation that they will inhibit the production of pathogenetic antibodies or suppress the inflammatory responses provoked by antigen-antibody reactions. But since the etiology and pathogenesis of most of these diseases are in fact unknown, it is not surprising that such a restricted therapeutic approach is not a panacea." (p. 221)
6. (a) "Despite their increasing prevalence, relatively little is known about the role of immunologic protective mechanisms operative against gram-negative infections in man. Although type-specific antibodies are of paramount importance in protection against streptococcal and pneumococcal infections, they appear to be less effective in protecting against infections from enteric gram-negative bacilli. Most people possess so-called 'natural antibodies' to gram-negative bacilli, but these do not appear to protect against such infections. Human pyelonephritis is another infection in which type-specific antibody to enterobacteria appears to have little protective effect. Both persistence of infection in the kidney and acquisition of new infections have been shown to occur despite high titers of O specific antibody to the infecting organism." (p. 265)
7. FALSE. "Well recognized side effects of all the



currently employed immunosuppressive drugs include myelotoxicity, secondary infections and gastrointestinal disturbances. There is no evidence that the induction of leukopenia is required for a beneficial effect from cytotoxic drugs. Our own practice is to avoid leukopenia by adjusting the dose of drug whenever required. The severity of adverse effects of cytotoxic agents is often dose-related, and compounded by pre-existing impaired renal or liver function. Methotrexate and 6-mercaptopurine are noteworthy in this regard, and they should be administered with extreme caution to any patient with impaired liver or kidney function." (p. 248)

8. FALSE. "Recent reviews of legal abortion have emphasized the point that termination of pregnancy under supervised conditions, although relatively safe, is not without risk. Bleeding, laceration of the cervix, uterine perforation, infection and thromboembolism are well known complications. We have recently seen acute defibrinogenation with generalized hemorrhage develop in a patient after the intra-amniotic injection of hypertonic saline (20 per cent sodium chloride), and Halbert et al. have reported another case. This complication, which is not widely recognized, prompted an examination of the changes in maternal coagulation factors in a series of patients undergoing abortion by this method." (p. 321)
9. (b) "Heparin is considered to be the drug of choice for the management of patients with recent venous thromboembolism. In the only reported controlled study, Barritt and Jordan demonstrated that heparin followed by oral anticoagulants produced a striking and statistically significant reduction of death and recurrence in patients with pulmonary embolism. Nevertheless, the frequency of death, recurrent embolism, and bleeding during treatment has varied greatly in the many reports of heparin treatment of patients with venous thromboembolism. In general death and recurrence have been least frequent when heparin was given intravenously, in a standard high dosage, or in doses sufficient to prolong the results of in vitro coagulation tests to within a defined therapeutic range." (p. 324)
10. (b) "The use of a defined therapeutic range to adjust heparin treatment is based on the assumption that complications during treatment—namely recurrent thrombosis, embolism, and bleeding—are less likely to occur when the coagulation-test results are within this range. Although animal studies have provided some support for this supposition, it has not been tested clinically, and it is currently uncertain whether monitoring the dose of heparin offers any advantage over a standard dose regimen." (p. 324)
11. TRUE. "The results of this study suggest that recurrence of venous thromboembolism during

heparin treatment is rare if the heparin dose is adjusted to prolong the APTT to greater than 1½ times control levels at all times.

"In only five patients (3 per cent) did clinical recurrence of venous thromboembolism develop, and there were no deaths from pulmonary embolism during heparin treatment. Before recurrence all had a mean APTT of less than the defined therapeutic range, and the APTT remained below this range for longer periods than in patients without recurrence. This was so despite the fact that patients with recurrence were treated with similar doses of heparin before recurrence as patients without recurrence, and suggests that patients with venous thromboembolism should be given enough heparin to prolong the APTT to within the therapeutic range, irrespective of the amount of heparin required to obtain that result." (p. 326)

12. TRUE. "Slowing of heart rate to 60 or fewer beats per minute not only may reduce the cardiac output but also may lead to ventricular irritability. Both these complications are particularly undesirable in patients under treatment in intensive-coronary-care units. Consequently, under such circumstances it has become customary to accelerate the heart rate by the intravenous administration of atropine. The appearance of ventricular fibrillation in two patients and short bursts of repetitive ventricular firing in a third patient after intravenous administration of atropine in the space of three months indicates that the use of this drug may not be completely without risk." (p. 336)

Aug. 24, 1972

13. (b). "The interaction of drugs, antibodies, and platelets to produce thrombocytopenia is well known. However, an antigenic role for a drug metabolite in this disorder has not been recognized. We recently had the opportunity to study a patient with acute drug-induced thrombocytopenia in whom a drug metabolite rather than the drug itself proved to be the responsible antigen. The patient, a 22-year-old man, was admitted to the hospital one day after the onset of gross purpura and was found to have a platelet count of 4000. The bone-marrow aspirate contained increased numbers of megakaryocytes. There were no other clinical or hematologic abnormalities.

Aug. 31, 1972

14. TRUE. "Any increase in the maintenance dose of salicylate will result in a more than proportional rise in the plateau level of salicylate in the body; this level is reached more slowly by repeated administration of large daily doses (irrespective of dosing interval) than with smaller doses. These characteristics must be taken into consideration in the design of dosage regimens and in the monitoring of patients. The maximum response from the usual therapeutic regimen (4 g daily or more) of salicylate or aspirin (which is hydrolyzed rapidly



in the body to salicylate) cannot be expected to occur in less than one week, and plasma salicylate concentrations are likely to increase up to that time.

"The data presented here explain recently reported clinical observations that a 50 per cent increase in the daily dose of aspirin (from 65 to 100 mg per kilogram) produced about a 300 per cent rise in the concentration of salicylate in the serum." (p. 431)

15. TRUE. "An increased frequency of chromosomal abnormalities has been noted in fetuses from spontaneous abortions. Because some chromosomal deviations are associated with dermatoglyphic abnormalities, this study was undertaken to determine if any specific dermatoglyphic pattern was more prevalent in women with increased fetal wastage. The dermatoglyphic findings in these women were compared to the fingerprints of women to have had no reproductive failure.

"This study shows an association between the presence of a fingerprint pattern of 10 whorls and fetal wastage. No women in the control group who had two or more normal pregnancies demonstrated a 10-whorl pattern." (p. 451)

#### JAMA

August 7, 1972

16. TRUE. "The incubation period is the only reliable clinical criterion for distinguishing between short-incubation infectious hepatitis (IH) and long-incubation serum hepatitis (SH) infections with the hepatitis virus. Unfortunately, except in epidemic infections or in those that follow parenteral injection of infected materials, it is difficult, if not impossible, to establish the source of infection and date of exposure. Moreover, even when the source and mode of infection can be identified, distinction between IH and SH infections still requires an accurate estimate of the incubation period, since both can be transmitted by either the oral or parenteral route." (p. 571)
17. TRUE. "The data presented confirm previous reports that, early in the course of the disease, serum IgM concentration is significantly higher in patients with short-incubation (IH) than in those with long-incubation (SH) infections. However, it is apparent from our observations that the overlap of values in the two groups was too great to permit use of the IgM level as a criterion for distinguishing between these two types of infection." (p. 575)
18. FALSE. "In accord with previous reports, we observed that, during the acute phase of the disease, thymol turbidity levels were significantly higher in patients with IH than in those with SH infections. Although the separation between the values in the two groups was greater than in the case of serum IgM concentration, there was sufficient overlap to render the thymol turbidity level unsatisfactory as a criterion for distinguishing between IH and SH infections." (p. 575)

19. FALSE. "In recent years, public concern over the use of certain hallucinogenic agents has obscured the fact that commonly used belladonna alkaloids also produce mind-altering effects. A related preparation is stramonium which had been used for many years to relieve asthma. It is available as cigarettes, pipe mixture or powder to be burned like incense, and the asthmatic patient uses it by inhaling the smoke.

"A typical asthma preparation contains 50% stramonium, 25% potassium nitrate to facilitate burning, belladonna, grindelia, or tobacco to make the desired bulk, along with trace amounts of flavoring agents. The alkaloids of stramonium are the same as those of belladonna: scopolamine and atropine in varying proportions depending on species and conditions of cultivation, harvesting, and storage. The mixture is adjusted to an alkaloid content of 0.3%, the equivalent of 1.25 mg of atropine per unit dosage, eg, per cigarette, pipeful, etc. About 1/100 of the available alkaloid is absorbed systemically when the product is used as directed.

August 14, 1972

20. TRUE. "Findings from a 16-year follow-up study of 5,209 Framingham adults indicate that blood pressure, serum cholesterol, cigarette smoking, electrocardiographic evidence of left ventricular hypertrophy, and glucose intolerance are precursors common to all three major atherosclerotic events—atherosclerotic brain infarction (ABI), coronary heart disease (CHD), and intermittent claudication (IC). The dominant factor predisposing to ABI is high blood pressure. None is clearly dominant for CHD. Glucose intolerance is only weakly related to this disease while cigarette smoking is related weakly (if at all) to angina pectoris. All five factors play an important role in IC. In general, relationships appear to be as strong for women as men. When all five variables are considered jointly, they have a closer relationship with ABI and IC than with CHD, and equally strong relationships in every age group between 45 and 74 years of age." (p. 661)
21. (b). "Kennedy and Simpson compared aerosols containing 200  $\mu$ g of isoproterenol and 400  $\mu$ g of albuterol in six normal volunteers and found no change in heart rate or blood pressure after albuterol, whereas isoproterenol produced significant increases in pulse rate and systolic blood pressure and a fall in diastolic pressure.  
"This study was designed primarily to evaluate duration of bronchodilator effect of albuterol rather than its cardiovascular effects.  
"The mechanism for the longer duration of albuterol is intriguing. . . . It is of interest that tritiated albuterol given by aerosol appears much later in the urine than a comparable dose given orally, and it may be that the drug is more slowly absorbed from the bronchial tree than from the gut." (p. 685)



22. DOES NOT. "The failure to demonstrate significant changes in VMA excretion with the different diets suggests that dietary restriction of these foods is not necessary prior to determining urinary VMA excretion. This will be a great relief for dieticians, physicians, and the many hypertensive patients in whom a VMA collection is a routine screening test for pheochromocytoma." (p. 705)

23. FALSE. "Extended hemodialysis in small children has not been an accepted therapeutic modality because of a lack of information regarding technical feasibility, cannula function, growth, and psychosocial adaptation of patient and family. This report has attempted to clarify these questions.

"Technical problems encountered during dialysis of these children were few in number and easily overcome. Modification of commercially available equipment to permit a smaller volume of the child's blood to circulate in the dialyzer was the only significant technical adjustment required. . . . Few difficulties were encountered due to cannula malfunction and only eight of 18 children required revisions during the period of dialysis.

"Normal linear growth occurred in five children on dialysis. An additional child grew at 60% of the normal rate. Two children failed to grow. Whether or not adequate caloric intake during the period of dialysis is the critical factor affecting growth remains to be substantiated. However, our data on three children confirm the findings of Simmons et al that adequate caloric intake is associated with normal linear growth in children on dialysis.

"The smaller younger children and their families adapted well to the dialysis program; in fact the younger children had less difficulty than many adolescent patients." (p. 873)

24. FALSE. "To assess the diagnostic value of brain scanning in pediatrics, results in 556 children were analyzed. Follow-up data were available in 409 children. Of these, 37% had brain scans done because of seizures; other frequent indications were motor abnormalities (7.4%), headache (5.0%), suspected optic neuritis (4.9%), raised intracranial pressure (4.9%), and trauma (4.7%). Fifteen percent of the scans were abnormal, most often because of tumors of the brain, pituitary fossa, brain stem, and cerebellum; subdural collections; cerebral abscess; and encephalitis. Three scans were false-positive; 12 patients with tumors had normal scans. Scans were graded according to the extent they changed the prior diagnosis. They were found most useful in patients suspected of having posterior fossa disease, raised intracranial pressure, generalized encephalopathy or metastases, and after trauma, and least useful in cases of generalized seizures and mental or behavioral abnormalities." (p. 877)

25. No. "I do not think it is feasible to make a conclusive diagnosis in the absence of histological

evidence. The term chronic active hepatitis describes accurately the clinical picture that often accompanies the histological lesion described, but in the absence of that histological lesion the diagnosis must be seriously questioned. Certainly the diagnosis cannot be established by clinical criteria alone. When liver biopsy cannot be performed and the clinical situation warrants it, a presumptive diagnosis may be made and therapy instituted. The diagnosis should be confirmed by liver biopsy at a later date in such cases." (p. 891)

Aug. 28, 1972

26. TRUE. "The chemistry laboratories and the drug developers are bringing to the market new substances almost daily. It can be expected that there will be other 'quests' with newer substances as we struggle to help the aspiring young athlete learn to depend only upon himself for his performance and his development. One real problem is that, to my knowledge, in all of the literature there is no good scientific evidence that any of these substances really helps the athletic performance of anyone.

"The combination of amphetamines with barbiturates has also enjoyed a certain amount of popularity among some athletes and is often referred to as a greenie. The combination apparently gets the amphetamine titillation to the pleasure and ego support centers, but the presence of barbiturates alleviates some of the nervousness and shakiness felt as side effects of the amphetamines alone. As far as any increased ability or efficiency is concerned, the performance is no better and in many instances the athlete actually performs worse. Subjectively he will tell you he feels his performance is better." (p. 1008)

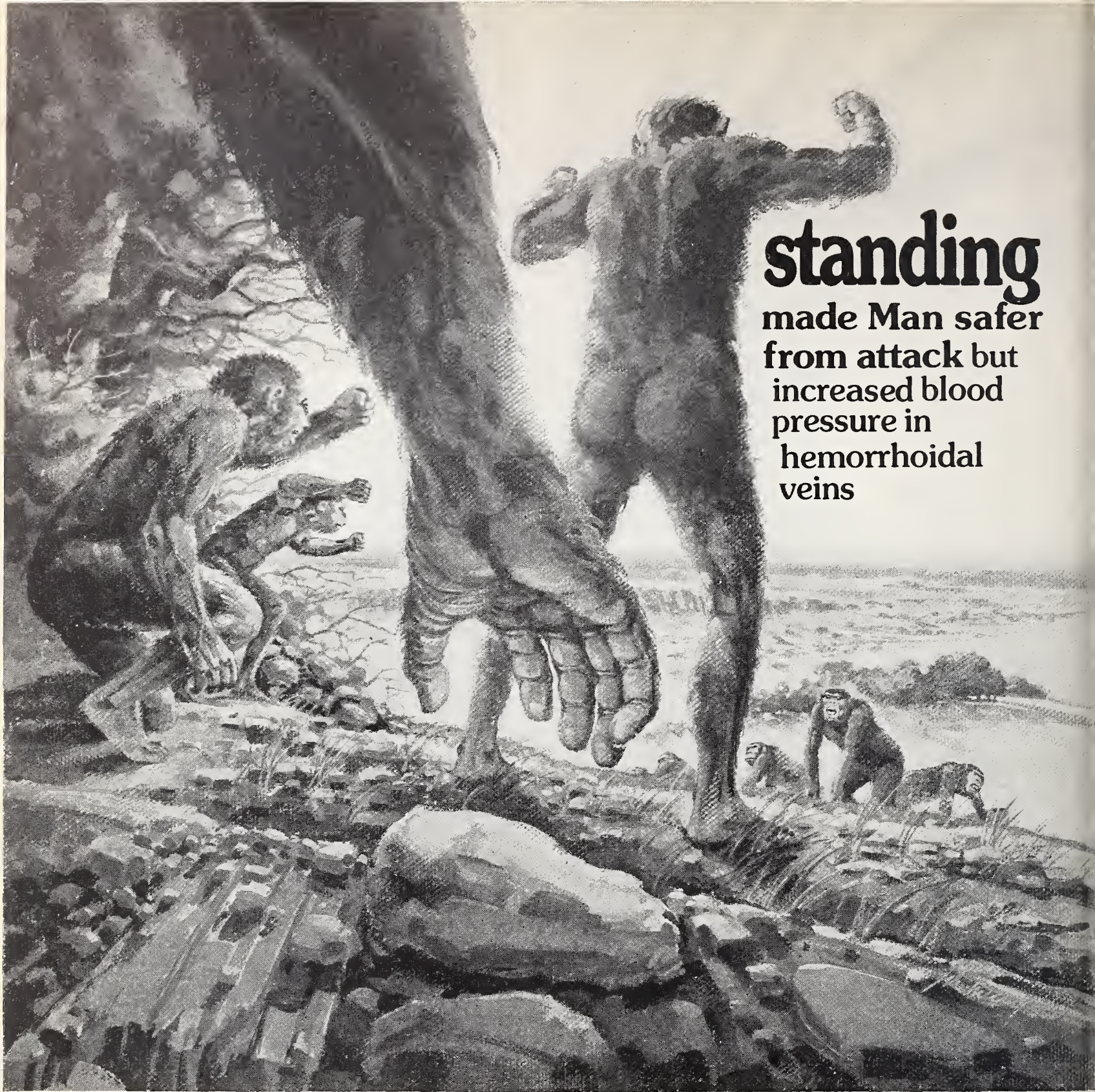
27. TRUE. "Like most endurance athletes, marathon runners are characterized by their highly developed aerobic capacities ( $Vo_{2max}$ ) and an ability to tolerate high rates of energy expenditure (70% to 90%  $Vo_{2max}$ ) without accumulating blood lactate. During marathon competition these men must alter their speed to compensate for the detrimental effects of uneven terrain, wind resistance, and thermal stress. Such factors add to the circulatory and metabolic demands of running. Heat produced in the active muscles must be transported to the body surface via the circulatory system and subsequently dissipated to the environment. Since the major responsibility of circulation is to transport nutrients and metabolic wastes, increasing the environmental heat stress will overload the circulatory system, thereby reducing performance and posing a risk to the runners' health." (p. 1024)

## ANNALS OF INTERNAL MEDICINE

August 1972

28. TRUE. "A study of the incidence of Hodgkin's disease in Albany County, N.Y., from 1950 through 1970, showed a period of high incidence followed by an apparently reciprocal period, when the incidence of the disease was below average.





**standing**  
made Man safer  
from attack but  
increased blood  
pressure in  
hemorrhoidal  
veins

#### Precaution

Prolonged or excessive use of Anusol-HC might produce systemic corticosteroid effects.

Symptomatic relief should not delay definitive diagnosis or treatment.

#### Dosage and Administration

Anusol-HC: One suppository in the morning and one at bedtime for 3 to 6 days or until the inflammation subsides.

Regular Anusol: one suppository in the morning, one at bedtime, and one immediately following each evacuation.

to help ease  
acute symptoms of  
hemorrhoids

# Anusol-HC

**Hemorrhoidal Suppositories with Hydrocortisone Acetate. On your Rx only!**  
Each suppository contains hydrocortisone acetate 10 mg; bismuth subgallate 2.25%; bismuth resorcin compound 1.75%; benzyl benzoate 1.2%; Peruvian balsam 1.8%; zinc oxide 11.0%; and boric acid 5.0%; plus the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated vegetable oil base containing cocoa butter.

for long-term  
patient  
comfort

# Anusol

**Suppositories and Ointment** Each suppository or gram of ointment contains the active ingredients of an Anusol-HC suppository minus the hydrocortisone.

**Warner/Chilcott**



Division,  
Warner-Lambert Company  
Morris Plains, New Jersey  
07950

ANGP-33



- The increased incidence closely paralleled temporally the occurrence of cases in a specific group of students, their friends, and household relatives. Thirty-four lymphoma cases, of which 31 were Hodgkin's disease, have been interlinked to date. These observations and the occurrence of similar Hodgkin's disease groupings in two different areas suggest that the pattern of disease occurrence was similar to that of an infectious disease." (p. 169)
29. WAS. "Thus, the available evidence suggests that Hodgkin's disease was transmitted either directly from case-to-case or through some health carrier. The existence of an asymptomatic carrier state of subclinical infection is recognized in many communicable diseases. It would seem likely that transmission of the hypothesized infectious agent(s) occur through direct contact, the oral-respiratory, or gastro-intestinal routes, or both, and that an incubation period of years precedes the clinical manifestations. Moreover, it would appear that either some individuals are more infectious than others or that other unknown risk factors promoting transmission vary." (p. 179)
  30. INCREASED. "Proof that anemia is caused by iron deficiency usually depends on laboratory tests. Morphological interpretation of the blood smear is difficult, and changes in erythrocyte morphology and red cell indexes are often absent in mild iron deficiency. Serum iron levels and iron-binding capacity are more sensitive indexes of iron deficiency, but they too often fall within the normal range when the anemia is mild. Examination of the bone marrow aspirate for stainable iron has been regarded as one of the most sensitive and reliable diagnostic methods for detecting iron deficiency. This view is reasonable, but the technique has several limitations, and a more practical but reliable and sensitive substitute is needed.  
"Cobalt absorption is increased in iron deficiency, and the absorbed cobalt is excreted in the urine. Recently, a test based on the urinary excretion of an oral dose of  $^{57}\text{Co}$  has been proposed as a method for detecting iron deficiency. We describe a simplification of the technique, with a 6-hour rather than a 24-hour urine collection, and the use of the test for the investigation of anemia and the assessment of body iron balance." (p. 181)
  31. FALSE. "In our study the cobalt test clearly distinguished between patients with iron deficiency anemia and patients with anemia due to causes other than iron lack: patients with the former excreted more than 12% of the dose, whereas those with the latter excreted less than 11%. Hence the finding of a value of 11% or less in a patient with anemia suggests that the primary cause of the anemia is not iron deficiency, and a search for other causes is warranted. A value greater than 11% in an anemic subject suggests that the anemia is caused by iron deficiency." (p. 185)
  32. FALSE. "The small amounts of cobalt used in the test have led to no untoward effects. The radioactivity that is administered is similar to that used in the Schilling test for vitamin  $\text{B}_{12}$  absorption, and the radiation exposure is negligible." (p. 187)
  33. FALSE. "*Farmer's lung* may be as old as society and has been more intensively studied than the other less well documented examples of extrinsic allergic pneumonia. The definition has been given as 'pulmonary disease due to the inhalation of the dust of moldy hay or other vegetable produce characterized by symptoms and signs attributable to a reaction in the peripheral part of the bronchopulmonary system and giving rise to a defect in gas exchange.' This definition of farmer's lung clearly separates the condition from that of asthma, 'an intermittent increase in airways resistance reversible spontaneously or by therapy,' yet is broad enough to allow the inclusion of bagasse worker's lung or any similar response. The disease results from the repeated exposure to the dust of moldy hay (oats, corn, barley, beet pulp) but not apparently to the dust of moldy soybean or peanuts. Only about 50 per cent of heavily exposed persons are affected." (p. 132)
  34. TRUE. "After a variable period of exposure to the dust of moldy hay, commonly six to ten weeks, re-exposure is followed four to six hours later by the characteristic Arthus reaction.  
"Thirty-five per cent of cases present with this delayed sudden onset of malaise, anorexia, shivering, nonproductive cough and shortness of breath. Examination reveals fever, tachypnea and possibly scattered inspiratory rales. After a few days the symptoms resolve pending further re-exposure.  
"Forty-nine per cent present with a less typical insidious onset of progressive weakness and shortness of breath that may suggest some other interstitial process. Nine per cent commence with an insidious onset, and with repeated re-exposures, more typical acute attacks occur. Ten per cent give a history of acute or insidious onset, to be followed later by attacks of extrinsic nonatopic asthma on further exposure. After months or more of exposure, the patient may present with a picture indistinguishable from that of diffuse interstitial fibrosis." (p. 133)
  35. FALSE. "Roentgenologic changes are usually bilateral but may not be symmetrical. Diffuse infiltrates, varying in size from millet seed (miliary) to large coalescent densities may be seen, or alternatively, areas of 'alveolar' consolidation and atelectasis. Hilar lymphadenopathy is not a feature. Resolution may take weeks or months. In subacute cases with insidious onset the roentgenogram may be normal; in chronic cases, a picture may be of diffuse interstitial fibrosis. Only in the acute phase does the roentgenogram correlate with the clinical state." (p. 133)

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	25/75 .....	89.00	155.00	265.00	352.00	441.00
	50/150 .....	101.00	176.00	300.00	398.00	498.00
	100/300 .....	111.00	194.00	332.00	440.00	552.00
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## *Lithium Carbonate in the Ambulatory, Chronically Psychotic Patient\**

W. LEWIS NEAL, M.D. AND KENNETH J. MUNDEN, M.D.

Currently it is generally agreed that lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) is the drug of choice both for the active treatment of the acute mania and for the prophylactic treatment of both phases of manic-depressive disorder. Additionally, the drug is adjudged to be of some benefit in certain selected cases of schizophrenia of the schizo-affective variety. At the present time responsible medical authorities do not advocate the routine utilization of lithium carbonate in individuals diagnosed as chronically schizophrenic.

With the foregoing in mind, the following is written in order to report the quite definite and dramatic responses to lithium carbonate of acute psychotic processes in six patients diagnosed as chronically schizophrenic. The acute psychoses were treated entirely on an outpatient basis without a single day of hospitalization for any of the six patients included in this report. Another group of five acutely psychotic patients with past diagnoses of chronic schizophrenia were treated with  $\text{Li}_2\text{CO}_3$  on an outpatient basis. These five patients failed to respond adequately to  $\text{Li}_2\text{CO}_3$  and are not described in this report.

During a four-month period in early 1972, the six patients, each carrying a long-standing diagnosis of schizophrenia (three were diagnosed as chronic paranoid schizophrenia, and three as chronic undifferentiated schizophrenia) were seen in the Outpatient Department for evaluation of irrational behavior. None of the six patients was experiencing his initial episode of severe emotional-mental disturbance; all six patients had required inpatient care in the past

for episodes of gross irrationality. Each of the six patients had at least one family member who was deeply interested in seeing the patient return to normalcy and who was living under the same roof with the patient. Five of the six patients had been hospitalized for emotional-mental disturbances four or more times in the past. One of the six had been an inpatient only once.

Examination of the old charts disclosed that in only one of these six patients was there even a passing reference to the possibility of any psychotic diagnosis other than paranoid or undifferentiated schizophrenia. Additionally, none of the six old charts contained any psychological tests interpreted to suggest manic-depressive disorder or schizo-affective schizophrenia.

All six patients on separate occasions had each been individually evaluated, diagnosed, and treated by at least three psychiatrists prior to their seeking outpatient assistance in 1972. All six had been inpatients in a state psychiatric facility in the past, and five of the six had each been evaluated by at least one private psychiatrist.

Outpatient control was made possible in each case (1) by placing complete responsibility for the administration of the potentially toxic drug, lithium carbonate, in the hands of a supportive and responsible adult family member, in whom the patient had some (however slight) degree of trust, (2) by administering Mellaril (usually 100 mg q.i.d.) usually during the first five days of lithium administration, (3) by seeking to establish and maintain serum lithium levels within a range of 0.50 mEq/L to 1.00 mEq/L, (4) by obtaining blood lithium levels weekly, (5) by brief outpatient visits weekly,

\*From the Tennessee Psychiatric Hospital and Institute, Outpatient and Community Services, Memphis, Tenn.



and (6) by providing in each case for the possibility of immediate hospitalization of any patient in case of the development either of profound worsening of the psychotic process or of acute lithium toxicity. Neither of these two specific complications occurred in the six cases cited and, consequently, inpatient care was not necessary after the initiation of lithium carbonate in the Outpatient Department.

After obtaining baseline studies in each case, a member of the patient's family was instructed in the proper administration of lithium carbonate. On the first day of therapy, the family member was to give the patient one 300 mg capsule of lithium carbonate b.i.d. ( $\text{Li}_2\text{CO}_3$  was stated in b.i.d. dosage in order to minimize the possibility of nausea.) On the following four days the patient was to receive  $\text{Li}_2\text{CO}_3$  300 mg q.i.d., to be taken with meals or with milk and soda crackers whenever practicable. The soda crackers provide the patient with some of the extra sodium he should have while taking lithium carbonate, and the milk serves to reduce the hypertonicity of the gastric juices that is the consequence of lithium carbonate ingestion and the occasional cause of nausea.

During these first five days, the family member was to exercise his or her own discretion in the administration of Mellaril to control the patient's psychotic behavior. Mellaril was generally to be administered 100 mg q.i.d.; however, the family member was at liberty to administer a total daily dosage of 200 mg to 800 mg.

On the sixth and seventh days, Mellaril was to be discontinued entirely and  $\text{Li}_2\text{CO}_3$  dosage was to be reduced to 300 mg t.i.d. On the eighth day the patient was to return to the Outpatient Department accompanied by the family member. The patient was to fast for twelve hours prior to venipuncture on this eighth day.

At this visit, it was possible for the outpatient physician to interview and examine the patient to observe the effects of a week of lithium therapy without the masking effect of Mellaril. If the patient demonstrated marked improvement, the maintenance dosage of lithium carbonate was determined on the basis of the serum level of lithium. Even when the patient had improved dramatically, Mellaril tablets were made available in case of relapse. If, on the other hand, psychotic symptoms persisted unrelieved after one week,  $\text{Li}_2\text{CO}_3$  and Mellaril

were again administered in combination.

EDITOR'S NOTE: *Protocols of the six patients, omitted here, may be obtained by those interested by writing the authors.*

Five of the six patients demonstrated dramatic improvement after one week, at which time Mellaril was withdrawn completely while lithium carbonate was continued on a maintenance basis. Blood levels of lithium were maintained between 0.5 and 1.0 mEq/l. In the sixth patient, symptoms of disorientation, decreased need for sleep, and marked elevation of mood persisted for four weeks after initiation of lithium carbonate, at which time the psychotic episode terminated suddenly and dramatically. Response in this patient was related to a sharp increase in the daily dosage of lithium carbonate.

All six patients exhibited complete resolution of their acute psychotic process, and, at the time of this writing, have remained free of recurrence of psychotic symptoms. Five of the six patients are being maintained on lithium carbonate as a prophylactic measure. In one it was necessary to discontinue maintenance  $\text{Li}_2\text{CO}_3$  when a mild degree of polyuria (with nocturia) developed after five months of therapy. The polyuria cleared completely within a few days after stopping  $\text{Li}_2\text{CO}_3$ . Two of the six patients are working full-time, one is working part-time, two are functioning effectively as housewives, and one is attending school.

Although each of the six patients exhibited thoroughgoing disorganization of thought during the initial outpatient interview, all were controlled solely on an outpatient basis to the point of total dissolution of the acute psychotic process.

## CONCLUSION

Within the limitations of our present knowledge, it is impossible to determine with certainty the final interpretation of the foregoing reported facts. It is indeed certain that much has yet to be learned about the precise indications for the utilization of lithium carbonate. It is additionally certain that the six cases cited above demonstrate conclusively that even the repeated diagnosis of chronic schizophrenia is not an absolute contra-indication for the utilization of lithium carbonate in a patient presenting with acute psychosis. This study emphasizes the value of the drug in clinical practice in ambulatory patients, and its potential effectiveness in those previously considered unresponsive.



# *Nitrofurantoin Macrocrystals in the Treatment of Simple Cystitis in Women*

FRANK MALONE, M.D.

Although not as dramatic in treatment requirements as most other urological problems, urinary tract infections are frequent and important illnesses in many clinical practices. Selection of the proper single antibacterial drug, with low toxicity, is often quite difficult. The matter of resistant bacteria is becoming an increasing problem since the introduction of antibacterial agents, adding another element to the physician's challenge. This clinical study was done to support the proposition that the macrocrystalline form of nitrofurantoin (Macrochantin capsules, Eaton Laboratories) meets most of the criteria for single drug therapy in the treatment of simple cystitis in women.

The Macrochantin capsule was developed as a direct response to the need for an anti-infectious agent with the specific activity of microcrystalline nitrofurantoin (Furadantin, Eaton Laboratories) against urinary tract infections, but with less tendency toward the consequent gastrointestinal disturbances reported by many patients. Because of the slower absorption rate, patients that could not tolerate Furadantin were able to accept Macrochantin capsules without the nausea. This slower absorption, however, apparently does not interfere with its effectiveness. The efficacy of oral Furadantin in cystitis and other specific urinary tract infections has long been recognized, and although its toxicity, particularly with respect to nerve damage and blood dyscrasias, is generally lower than that of other agents of equal potency, it has been associated with nausea and vomiting in a significant number of reported cases.

Nitrofurantoin macrocrystals differ from the microcrystals only in their physical properties. "Since nitrofurantoin is of limited solubility in water, it was hypothesized that an increase in size of the drug particles would retard its solution rate significantly in, and consequently its absorption from, the alimentary canal. Slowing the drug's entry into body fluids, it was hoped, would lower its concentration peaks in serum and thereby decrease the incidence and severity of nausea and emesis, without significantly af-

fecting its concentration in the urinary tract."<sup>1</sup> These two drugs have the same antibacterial spectrum, however, and are equally effective in the chronic and refractory infections of the urinary tract. Hailey and Glascock,<sup>1</sup> in their collaborative study reported in 1967, found that of 112 patients who had experienced nausea and vomiting with Furadantin, only 20% showed similar reactions to Macrochantin. This represents a considerable reduction and similar results have since been reported by other clinicians.<sup>2</sup> This study, although small in number, bears out these previous reports.

In a previous study, in 1967, of simple cystitis in women patients,<sup>3</sup> Furadantin was found to be 100% effective in sterilizing the urine in those patients with positive urine cultures on their first visit. The clinical cure rate, based on symptoms and signs of cystitis, was 91%. The study reported here was undertaken to determine whether Macrochantin would be equally as effective in a group of similar patients. Acute cystitis is a common problem among women, particularly in women in their middle years. Failure to achieve prompt control can lead to ascending infection of a more resistant, or refractory, type. Thus it is important that the early medication be promptly effective, as well as innocuous to the general body system. Both actual and potential infection should be considered.

## METHOD

Our series included 53 women whose ages varied from 3 to 76 years, the majority ranging in age from 20 to 60 and the median in the fourth decade. With respect to parity status, 8 of the patients had borne one child each, 29 had borne more than one child, 10 were nulliparous. The median of those whose parity was recorded as accurate was two. The remaining eight patients included in the study had no parity status recorded.

There was a history of previous urinary tract infection in 42 cases. One patient had undergone nephrectomy two years prior to the study. Various concomitant disorders were noted in 17



cases. These included vaginitis in three, and lumbosacral strain in two instances. In one case the presence of a cystocele was thought to contribute to the urinary bladder symptoms, especially the presence of a pressure sensation.

The patients commonly reported frequency of urination as the major symptom. Dysuria, urgency, burning sensation on urination, and the presence of pressure also were preponderant. Pain was noted in 24 instances and hematuria was present in 18. This includes two cases of acute hemorrhagic cystitis.

The length of time the symptoms had been present before the patient sought medical assistance ranged from a few hours to three weeks. Most of the women sought help within the first week of symptoms. The onset of symptoms had been sudden and severe in 12 patients. (Table I)

TABLE I

SIGNS and SYMPTOMS: (in numbers of patients)

Onset was sudden and severe in 12 patients.

	FIRST VISIT	SECOND VISIT
Dysuria	49	6
Urgency	49	12
Frequency	53	15
Nocturia	15	2
Spasms	9	0
Tenesmus	2	0
Hematuria	18	1
Fever	10	0
Pressure	43	19
Pain	24	1
Headache	4	0
Other	8	1

Urine specimens for bacterial culture and sensitivity studies were taken at the initial visit. These studies were repeated approximately one week following cessation of treatment. All speci-

mens for culture were obtained by sterile catheterization of the urinary bladder per urethra. The study allowed that if there were patients who failed to respond to the macro-crystal form of nitrofurantoin (Macrochantin) within two to three days, the initial sensitivity tests would serve as a guide to alternate therapy. The usual treatment for the women included in this investigation consisted of Macrochantin capsules, 50 mg, four times each day. The only exception to this regime was the single case of the three year old girl who was given a 50 mg capsule twice daily. The treatment period was for one week.

## RESULTS OF STUDY

The first bacteriologic cultures of the urine were positive for growth in 28 instances, in 22 of which there was significant bacteriuria (100,000, or more, per ml).

Specifically, the organisms isolated were: *Escherichia coli* in 15; *Klebsiella aerobacter* in five; *Proteus* species in three; and *Staphylococcus* was present in one. In only one case was the organism not identified. All strains proved sensitive to Macrochantin with the exception of one *Proteus* and one *Pseudomonas*. (Table II)

None of the patients with initially negative cultures showed any bacteriuria on the second culture. Among the other patients of the study, the urine had become sterile in all but six cases. In two instances where the first cultures had shown *Pseudomonas aeruginosa* and *Klebsiella aerobacter* respectively, the second cultures disclosed *Proteus* instead. Similarly, *Klebsiella aerobacter* was found in the urine of a patient who had shown *Escherichia coli* in the first culture obtained. Whether these changes from one

TABLE II

ORGANISM	FIRST CULTURE		SECOND CULTURE	
	# of patients sensitivity	# of patients insensitivity	# of patients sensitivity	# of patients insensitivity
E. coli	15	0	2	0
Proteus Species	2	1	0	2
Pseudomonas aeruginosa	2	1	0	0
Klebsiella aerobacter	5	0	2	0
Staphylococcus	1	0	0	0
Totals	25	2	4	2



bacteriuria to another represented reinfection or overgrowth could not be determined. The other three positive cultures represented a continuation of *Escherichia coli*. (Table III)

TABLE III  
ORGANISMS WHERE INITIAL AND  
SECOND CULTURES ARE BOTH POSITIVE.

FIRST CULTURE	SECOND CULTURE	
Pseudomonas aeruginosa	Proteus Species	(180,000)
Klebsiella aerobacter	Klebsiella aerobacter	(250,000)
E. coli	E. coli	(120,000)
E. coli	Proteus Species	(swarmed)
E. coli	Klebsiella aerobacter	(50,000)
E. coli	E. coli (negative on Culture #3, two weeks later)	

Of the 53 cases, 48, or 91%, were rated clinically and bacteriologically following the Macrochantin treatment regime. Three patients were clinically improved, whereas two were considered to be failures. Patients reported generally that their symptoms were cleared, or greatly improved, within three to six days of treatment. This was true even in cases where a bacteriological cure required a second course of Macrochantin treatment. In one of the two clinical "failures," symptoms improved but hematuria continued, with evidence of upper tract inflammation. In this case the urine cultures collected were negative. In the second "failure," *Escherichia coli* cleared from the urine within two weeks, for a bacteriologic cure, but the clinical response to the drug was unsatisfactory.

Adverse reactions were noted in four instances: mild diarrhea which was treated specifically while continuing the Macrochantin; mild nausea which was also treated without the cessation of the Macrochantin; severe nausea which required the discontinuance of the Macrochantin therapy; and one skin rash which occurred in a patient that also reported "a nervous twitch" and showed signs of hyperirritability, dictating cessation of the drug. It is interesting to note that in the last two cases, when Macrochantin was discontinued after four days of treatment, the urinary tract symptoms had already

cleared. Both of these cases were reported as clinical cures.

DISCUSSION

"Mechanical self sterilization of a normal urinary tract is accomplished by a high flow rate in the renal pelvis and ureter as well as by a frequent complete emptying of the urinary bladder. Bacteria, once introduced into such a normal tract, can survive only by invading these tissues. These bacteria will remain and thrive either within the urine or the tissues unless local defense mechanisms succeed in destroying them."<sup>4</sup> If the bacteria survive within the epithelium despite these natural defenses, the inflammatory reaction will likely give rise to urinary symptoms or signs. Bacteriuria may or may not be present even though inflammation of the tissues has occurred, giving rise to cystitis. Moreover, pathogens identified in the urine may not be the actual cause of the inflammation existing in the epithelium. Reports from etiologic studies remain inconclusive, despite exhaustive efforts to detect viruses, fungi, or bacteria other than the usual coli-aerogenes group. Hanash and Pool,<sup>5</sup> for example, in studying sixty patients, of which 54 were women, with either interstitial or hemorrhagic cystitis, applied specific and selective culture methods to tissue and urine specimens, with negative results. Their findings, they said, did not exclude the possibility that the lesions were caused by a virus or fungus that could not be isolated by current techniques.

The most effective therapy would thus be a drug which penetrates the tissues rather than remaining exclusively in the urine adjacent to susceptible tissue. Nitrofurantoin is capable of penetrating deeply into the bladder wall. This trait in part explains the drug's effectiveness in the medical management of cystitis. Apparently Macrochantin is as effective as Furadantin in the treatment of cystitis, even though it has a slower rate of absorption due to its larger crystalline size. This study would indicate that the side effects are, in most cases, mild. Conclusions regarding the relative frequency of side effects cannot be drawn from the series reported here, although the results suggest agreement with those reported for specific comparative studies which show that the macrocrystalline form is more readily tolerated.<sup>1, 2</sup> Bacterial resistance to Nitrofurantoin is evidently an infrequent occurrence and has not shown any tendency to increase over the last few years.<sup>6</sup>



## SUMMARY

Nitrofurantoin macrocrystals (Macrochantin, Eaton) in capsule form were administered to 53 female patients with signs and symptoms of acute cystitis. The result of this study was that 48, or 91%, were rated as clinically and bacteriologically cured. Culture studies revealed significant bacteriuria in 22 cases at the onset. Following Macrochantin treatment five of the patients had urine cultures positive for growth. Clinical response to therapy occurred within three to six days. There were four instances of mild side effects from the drug, one of which may or may not have been related to the drug therapy. Although the reactions caused the therapy to be discontinued in two cases, the judgment was that these were already clinically cured by the time the treatment was discontinued.

Since symptomatic relief of acute cystitis is not necessarily related to signs of urinary infection, the effectiveness of Nitrofurantoin is thought to be due, in part, to its ability to exert antibacterial and anti-inflammatory effects within the tissues of the bladder wall. The high incidence and the promptness of clinical response to Nitrofurantoin therapy in acute cystitis attest to the efficacy of this broad-spectrum antibacterial agent, even though a bacterial cause-and-effect relationship cannot always be demonstrated.

The rapid relief of symptoms following the use of Macrochantin negates the need for analgesics or azo-dye preparations and makes single drug therapy with Nitrofurantoin macrocrystal a practical choice in the treatment of simple cystitis in women.

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\* \* \*

In 1933 Robert Aldrich, working with Firor at Johns Hopkins, published a classical article in the *New England Journal of Medicine*, in which he expressed the thought that "there is enough infection in the burn area to account for all the symptoms and physical signs" that physicians had been ascribing to the "toxemia" which occurred, supposedly, as a result of thermal injury. Today, unfortunately, history repeats itself and the subject of "toxemia" is coming back to the fore. Many are still trying to implicate nebulous toxins in the problems of the burn patient.

"Fifty Years Progress in Burns." John A. Moncrief, M.D., CACS—Reprinted from the *Bulletin of The American College of Surgeons*, June, 1972.

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# Recognition of Curable Forms of Hypertension\*

GRANT W. LIDDLE, M.D., RONALD D. BROWN, M.D., VICTORIA R. LIDDLE

All physicians are aware that hypertension is one of the major causes of death and disability in the United States. It has become increasingly apparent during the past few decades that hypertension itself has many causes. An increasing number of clinical entities giving rise to hypertension have been elucidated, specific methods for diagnosing them have been developed, and in several specific treatments have become available which make it possible to correct the hypertension. Although drug

therapy in hypertension has also advanced greatly during the past 20 years, it is still desirable to identify curable hypertension and cure it when possible rather than to treat all patients alike, as though they all had chronic, incurable essential hypertension.

We have devised a simple system to guide physicians in screening for curable hypertension (Table 1). Some of the causes of hypertension can be ruled out by history alone, others by a cursory physical examination, still

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
REFERRING PHYSICIAN \_\_\_\_\_

BIRTHDATE \_\_\_\_\_  
AGE \_\_\_\_\_ SEX \_\_\_\_\_ RACE \_\_\_\_\_

DATE \_\_\_\_\_  
HOSP. CHART NO. \_\_\_\_\_  
WT. \_\_\_\_\_ HT. \_\_\_\_\_

INITIAL BP: LEFT ARM \_\_\_\_\_

RIGHT ARM \_\_\_\_\_

LEG \_\_\_\_\_

Etiology	Screened for by Finding of:	Date of Test	Result
Oral Contraceptives	History of taking O.C.		Yes ___ No ___
Licorice Intoxication	Eats large amounts of licorice		Yes ___ No ___
Coarctation of Aorta	BP in legs less than in arms		Yes ___ No ___
Congenital 11-OH-lase Defic.	Virilism		Yes ___ No ___
Adrenal Hyperplasia 17-OH-lase Defic.	Sexual Infantilism		Yes ___ No ___
Cushing's Syndrome	Obesity		Yes ___ No ___
Primary Aldosteronism	Hypokalemia (K <sup>+</sup> ___ mEq/L)		Yes ___ No ___
Pseudoaldosteronism	Hypokalemia (K <sup>+</sup> ___ mEq/L)		Yes ___ No ___
Cryptic Mineralocorticoid Excess	Low PRA after Furosemide (PRA: ___ ng/ml/hr)		Yes ___ No ___
Pheochromocytoma	Elevated VMA (VMA: ___ mg/24 hr)		Yes ___ No ___
Renal Artery Stenosis	Abnormal rapid sequence IVP		Yes ___ No ___
Obstructive Uropathy	Obstruction visualized on IVP		Yes ___ No ___
Primary Renal Disease	Abnormal urinalysis. RBC. ___; Prot. ___; Bact. ___		Yes ___ No ___
Essential hypertension	None of above		Yes ___ No ___

Confirmed by:

	Date of Test	Result
Normotension after stop taking O.C. for two months		Yes ___ No ___
Normotension after stop eating licorice for one month		Yes ___ No ___
Abnormal aortogram		Yes ___ No ___
High urinary 17-OH and 17-KS ( ___ mg/24 hr; ___ mg/24 hr)		Yes ___ No ___
Suppressed by Dexameth. 0.5 mgq6h ( ___ mg/24 hr; ___ mg/24 hr)		Yes ___ No ___
Low urinary 17-OH and 17-KS ( ___ mg/24 hr; ___ mg/24 hr)		Yes ___ No ___
High plasma DOC ( ___ ng%)		Yes ___ No ___
High urinary 17-OH ( ___ mg/24 hr.)		Yes ___ No ___
Resisted suppression with Dexameth. 0.5mgq6h ( ___ mg/24 hr.)		Yes ___ No ___
Low plasma renin activity ( ___ ng/ml/hr)		Yes ___ No ___
High urinary aldosterone excretion ( ___ µg/24 hr.)		Yes ___ No ___
Low plasma renin activity ( ___ ng/ml/hr)		Yes ___ No ___
Low urinary aldosterone excretion ( ___ µg/24 hr.)		Yes ___ No ___
Response to spironolactone 400 mg daily for six weeks		Yes ___ No ___
Elevated catecholamines ( ___ mg/24 hr)		Yes ___ No ___
Elevated metanephrines ( ___ mg/24 hr)		Yes ___ No ___
Stenosis on renal arteriogram		Yes ___ No ___
Renal vein renin ratio greater than 1.5 (ratio: ___)		Yes ___ No ___
Split renal function abnormal		Yes ___ No ___
Normotension after correction of obstruction		Yes ___ No ___
Elevated BUN ( ___ mg%) or creatinine ( ___ mg%)		Yes ___ No ___
Positive urine culture		Yes ___ No ___
Abnormal IVP		Yes ___ No ___
None of above		Yes ___ No ___

FINAL DIAGNOSIS \_\_\_\_\_

TABLE 1

\* From the Department of Medicine, Vanderbilt University School of Medicine, Nashville, Tenn. 37203 USA.  
Supported by Tennessee Mid-South Regional Medical Program Project #48.

others by a few simple laboratory tests, and the remainder by an x-ray examination. When this check list has been filled out with negative answers it would seem reasonable to proceed with nonspecific therapy. Until all of the ques-



tions have been answered, one should not be satisfied that his patient is receiving the best medical care that is available.

Beginning with the medical history, two of the curable causes of hypertension can be ruled out simply by ascertaining whether or not the patient has been taking oral contraceptives<sup>1</sup> or large amounts of licorice.<sup>2</sup> If the hypertensive patient has been taking either of these agents, it might be responsible for elevating the blood pressure. Cessation of oral contraceptives or licorice should be followed by normalization of blood pressure within a few weeks. If the blood pressure does not return to normal, other causes of hypertension must be considered.

Several other causes of hypertension can be ruled out during the physical examination. Coarctation of the aorta as a cause of hypertension can be excluded if the blood pressure in the thighs is higher than that in the arms. If it is not, coarctation must be suspected. The definitive diagnosis is established by aortography, and surgical correction of the coarctation should relieve the hypertension.

There are two varieties of congenital adrenal hyperplasia that give rise to hypertension. One of these (due to 11 $\beta$ -hydroxylase deficiency) gives rise to virilism<sup>3</sup> and the other (due to 17  $\alpha$ -hydroxylase deficiency) is associated with sexual infantilism.<sup>4</sup> Therefore these causes of hypertension can be ruled out by noting that there was no virilization during childhood and no unusual delay in development of secondary sex characteristics during adolescence. On the other hand, hypertensive patients who show evidence of excesses or deficiencies of sex hormones should be suspected of having congenital adrenal hyperplasia. Those with virilism will be found on further study to have *elevated* urinary 17-hydroxycorticosteroids and 17-ketosteroids and elevated plasma concentrations of 11-deoxycorticosterone, all of which can be suppressed by treatment with dexamethasone in doses of 0.5 mg every 6 hours. Those with sexual infantilism will be found on further study to have *low* urinary 17-hydroxycorticosteroids and 17-ketosteroids; their plasma levels of 11-deoxycorticosterone will be elevated. In either variety of hypertensive congenital adrenal hyperplasia, the overproduction of 11-deoxycorticosterone and, therefore, the hypertension, can be controlled by long term treatment with dexamethasone or hydrocortisone in doses just

sufficient to suppress pituitary-adrenal function to normal.

Cushing's syndrome, when curable, is almost always associated with some degree of centripetal obesity.<sup>5</sup> (When Cushing's syndrome is associated with metastasizing malignancy, the obesity that is so familiar a part of the syndrome is often lacking.) Therefore, if the hypertensive patient is not obese, tests for Cushing's syndrome will almost always be unrewarding. If the hypertensive patient exhibits obesity or other features of Cushing's syndrome, the diagnostic evaluation should include a measurement of urinary 17-hydroxycorticosteroids. If these are elevated a dexamethasone suppression test should be performed. Profound suppression of 17-hydroxycorticosteroids with 0.5 mg of dexamethasone every 6 hours effectively excludes the diagnosis of Cushing's syndrome. Failure of such suppression is strong evidence in favor of the diagnosis. Cushing's syndrome and the accompanying hypertension can usually be corrected by removing the abnormal source of cortisol (adrenalectomy) or of ACTH (pituitary ablation or removal of a tumor that secretes ectopic ACTH).

Considering the relatively small number of cases that have been discovered, primary aldosteronism has received an impressive amount of attention in the medical literature during the past seventeen years. It is important because it illustrates a classical mechanism of hypertensive disease and because it is one of the curable causes of hypertension. Although "normokalemic primary aldosteronism" is a real entity, it is so rare and so difficult to diagnose that it is of little more than academic interest to the physician attempting to deal in a practical manner with uncategorized hypertensive patients. For practical purposes, any hypertensive patient who has intermittent or persistent unprovoked hypokalemia should be suspected of having primary aldosteronism. Diuretic therapy, vomiting, or diarrhea, may provoke hypokalemia, and the question can be settled by observing the serum potassium on several occasions when such factors as these are not operative. The diagnosis of primary aldosteronism is established when it is demonstrated that under standard conditions the patient has subnormal plasma renin activity and high urinary aldosterone excretion.<sup>6</sup> Appropriate treatment is usually the surgical re-

removal of an adrenal adenoma.<sup>7</sup> If no adenoma can be found, 1½ adrenal glands should be removed, followed, if necessary, by treatment with the aldosterone antagonist, spironolactone<sup>7</sup>. Complete or partial correction of the hypertension occurs within two months in the great majority of cases.

"Pseudoaldosteronism" is a familial renal disorder which simulates primary aldosteronism in causing hypertension, hypokalemia, and suppression of plasma renin activity,<sup>8</sup> but aldosterone secretion rates are very low. The condition might be suspected in a hypertensive patient with a family history of this disorder. (A large kindred has been encountered in the Southeastern United States.) Otherwise, the diagnosis is likely to be established when one finds a patient who has the features of primary aldosteronism but has low rather than high aldosterone. The hypertension and hypokalemia can be corrected by treatment with triamterene; no other agent has been found effective in this particular disorder.

"Cryptic mineralocorticoid excess" is the name that has been applied to the syndrome of "essential hypertension with suppressed renin."<sup>9</sup> Approximately 20 percent of hypertensive patients fall into this category. It is important to recognize because the hypertension responds to specific treatment with the mineralocorticoid antagonist, spironolactone.<sup>9-11</sup> It is partly on the basis of this response that the syndrome is thought to stem from an excess of some unidentified mineralocorticoid, hence the term "cryptic mineralocorticoid excess." Once the hypertension has been reduced with large doses of spironolactone, it can be controlled indefinitely with doses of 100 to 200 mg per day.<sup>9</sup>

Most physicians who have had broad experience with pheochromocytomas consider that a complete hypertension evaluation should include a screening test for urinary catecholamines or catecholamine metabolites. Patients with pheochromocytomas almost always have values above the upper limit of normal, regardless of whether one measures catecholamines, VMA, or metanephrines.<sup>12</sup> Therefore, any one of these may be used for screening. If a high value is obtained, it should be confirmed by measurements of the other two modalities. If these are also high, it is generally advisable to place the patient under the care of a medico-surgical team with a good record of success in man-

aging pheochromocytoma, since this treacherous disease is often fatal if improperly managed. In recent years the surgical treatment of pheochromocytoma has been simplified by the availability of alpha-adrenergic blocking agents,<sup>12</sup> which control the pressor effects of catecholamines, and beta-adrenergic blocking agents,<sup>13</sup> which can be used to prevent catecholamine-induced cardiac arrhythmias. Properly treated, the hypertension of pheochromocytoma is almost always correctable.

Although in the past a variety of suggestions have been made as to when the physician should be alert to the possibility that a patient might have correctable hypertension secondary to renal artery stenosis, it is now apparent that all of these rules would neglect a substantial proportion of such patients. It can occur in any age group, and, if unrecognized and uncorrected, it can lead to chronic hypertension. It occurs in patients with or without a family history of hypertension, and it may or may not be accompanied by abdominal bruits.<sup>14</sup> Since it may account for 5% of our hypertension problem, it clearly should not be overlooked. The screening test that is most acceptable is the "rapid sequence intravenous pyelogram." Radiographic films taken 2, 4, or 6 minutes after the contrast medium is injected might show delayed opacification of the calyceal system of the kidney supplied by a stenotic artery. Later films taken at 10 or 15 minutes might show delayed "washout" on the same side. The affected kidney might also be measurably smaller than the unaffected one. Abnormalities such as this call for expert renal arteriography which should demonstrate the area(s) of stenosis. The functional significance of an area of renal artery stenosis should be confirmed by split renal function studies<sup>15</sup> or by bilateral renal vein renin measurements showing discrepancies between the two sides<sup>16</sup> consistent with diminished renal blood flow and increased renin production on the side with the significantly stenosed renal artery. With such evidence in hand, the experienced renovascular surgeon can confidently expect complete or partial correction of hypertension following corrective surgery in a very high percentage of cases.<sup>16</sup>

In obtaining a medical history, performing a physical examination, or performing intravenous urography, one may encounter evidence of obstructive uropathy which if corrected



might lead to the cure of hypertension.<sup>17</sup>

Many varieties of renal disease in addition to those mentioned above can cause hypertension. Even if they are not correctable, they deserve recognition so that the physician will be in a position to manage the patient's total problem, not merely the hypertension, more intelligently. For this reason every complete hypertension evaluation should include such things as a routine urinalysis and a blood urea nitrogen.

The screening procedures outlined in Table 1 are not formidable or expensive if one considers all that is at stake in recognizing or failing to recognize a curable cause of hypertension. Most of the screening studies can be completed or initiated during 2 office visits if one proceeds in an orderly fashion.

It is now apparent that a sizeable minority of patients with hypertension can be cured or effectively treated. One should not become discouraged by the fact that it is *only* a minority: for, if the physician ceases to look for curable hypertension, then not just a *majority* but *all* of his hypertensive patients will be incurable.

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## TRIGEMINAL NEURALGIA

### Vanderbilt University Hospital\*

DR. WILLIAM MEACHAM: Today, we are considering a clinical problem that has produced a vast amount of suffering and acute discomfort throughout the ages, a disorder that has baffled interested clinicians and researchers for years and for which no specific cause has yet been discovered. It is one which lasts intermittently for years, producing only the subjective symptom of pain without loss of function and without deleterious effects on the total body health except indirectly. This strange and peculiar disorder, known as tic douloureux, trigeminal neuralgia, or trifacial neuralgia, was first described as a clinical entity in 1776 by Fothergill, and for a while was known as Fothergill's disease. The intensity of the painful attacks experienced by victims of this disorder has resulted in its attaining the dubious reputation of being the most severe pain to which humans are heir. Those of us who have witnessed the desperation of these patients and their willingness to undergo almost any operative procedure, however uncomfortable or even deforming, in the hope of securing relief can attest to its horrible severity. Dr. Robert LeGrand will present the pertinent history on the patient for discussion today.

DR. ROBERT LEGRAND: The patient is a 65 year old right-handed Cuban female who was admitted to Vanderbilt University Hospital on September 6, 1972 with a chief complaint of "face pain." For the past two years, she had intermittent, brief, lancinating pains originating in the right upper alveolar ridge area with distribution over the 2nd division of the right trigeminal nerve. Any stimulation of this area would induce the facial pain. A trial of diphenylhydantoin (Dilantin) was given without pain relief. This was followed by administration of carbamazepine (Tegretol), which did produce relief, but had to be discontinued because of leukopenia. In the past several weeks, the attacks have become more frequent and more severe. There is no history of infectious process or trauma to the face and head area.

Her past history is significant only in that she had a cardiac irregularity for an unknown period of time and has been treated with quinidine recently. An abdom-

inal hysterectomy and cholecystectomy were done in Cuba many years ago.

Physical examination on admission revealed an irregular pulse of 85 per minute, blood pressure 130/70, respirations 14 per minute, and temperature 98.6° F. orally. She was a well-developed, well-nourished, Spanish-speaking woman. Examination of the heart revealed an irregular rhythm without murmurs or evidence of cardiomegaly. Right subcostal and lower midline abdominal surgical scars were present. The remainder of the general physical examination and the neurological examination were within normal limits. Specifically, there was no sensory or motor abnormality involving the right trigeminal nerve distribution. Skull films, including basilar views, were normal except for hyperostosis frontalis interna. Initial EKG revealed atrial fibrillation and a complete left bundle branch block.

On September 8, as the patient was being given sodium thiopental for induction of anesthesia, the heart rate was noted to be 150-180 per minute with a single short episode of what was thought to be ventricular tachycardia. Surgery was canceled. Follow-up EKG's showed no change from the admission EKG, and serial SGOT and CPK determinations were normal. The quinidine was discontinued, and she was digitalized with digoxin. The heart rate remained stable at 70-80 per minute. On September 11, she underwent right temporal craniectomy and middle fossa exploration with retrogasserian section of the 2nd division of the trigeminal nerve. Postoperatively, she has had a smooth course, except for a herpetic eruption in the right infraorbital area and right upper lip, occurring on the fifth postoperative day.

DR. MEACHAM: I think we all would judge this to be a case of classical trigeminal neuralgia characterized by the usual features of brief, acute, repetitive, lacerating pains in the distribution of one or more branches of the trigeminal nerve, followed by pain free remissions of varying lengths of time, and by the presence of trigger shots, or dolorogenic zones of Patrick. Note that the trigeminal nerve was normal on examination. These features, therefore, make the diagnosis by subjective rather than objective means.

As one would anticipate, a long and disappointing experience has accumulated throughout the years in the hopes of finding a specific and harmless medical cure for this painful affliction. The occurrence of long periods of spontaneous remission of the pain has led many to claim curative effects for many nostrums and combinations of drugs, but without real benefit being proven. Ferrous carbonate, trichlorethylene, vitamin B<sub>12</sub>, stilbamidine, and others have had a period of brief popularity. More recently, the anticonvulsants have been employed with some success—notably Dilantin, and currently, Tegre-

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tol seems to be specifically helpful in many patients, but there are those who cannot take this drug because of undesirable reactions to it or in whom the effectiveness seems to be attenuated. The surgeon, therefore, is still called upon to carry out some pain relieving operative procedure on the trigeminal sensory system. As you have heard, this patient has been subjected to an intracranial operative procedure that would be considered a slight modification of the classical surgical procedure in use for many years. Dr. Cobb, will you discuss the middle cranial fossa operative procedure for trigeminal neuralgia?

DR. CULLY COBB: This lady had an operation which is a slight modification of the most time tested surgical treatment for tic douloureux. In 1901, Spiller and Frazier first published a description of the operation, pointing out the necessity for dividing the sensory root proximal to the ganglion in order to secure permanent relief of the pain. The elevation of the dura of the temporal fossa, exposing the ganglion and opening Meckel's cave for a section of the sensory rootlets was the basis of the present day operation. In this patient, we were careful to select fibers directed toward the lower third or lower one-half of the maxillary division. This was done because the trigger zone was in the upper lip and small adjacent area of the nose. Although a number of fibers were divided, there is no complete anesthesia. Sensation in the tongue and lower lip as well as in the cornea is intact. This idea of preserving sensation except in the region where the pain is triggered by touch, was suggested by Frazier in 1925. The fibers directed toward one of the three major divisions would be divided. The discovery that manipulation of the ganglion by decompression or compression procedures might sometimes give permanent relief, and also the experience of observing the unpleasantness and sometimes serious complications of extensive section of the sensory root, have led to increasingly focal sectioning of the sensory rootlets. In this patient's case, the slightly vertical position of the ganglia made it unusually easy to identify the appropriate nerves and also to identify the motor root, a larger nerve lying behind the sensory rootlets following a more vertical course toward the foramen ovale.

I don't believe there have been any recurrences with our patients who had this operation except for one who developed tic douloureux on

the opposite side. A number of years ago, Francis Grant reported an incidence of recurrence of pain in 7.5% of almost 600 patients who had a differential partial rhizotomy. With the help we now have from drugs such as Dilantin and Tegretol, I feel that some slight risk of recurrence is much preferable to the troublesome complications which sometimes may follow extensive or complete section of the sensory root.

DR. MEACHAM: Dr. Cobb has outlined the procedure perfected and popularized by Frazier, Cushing, Peet, Sachs, and others—and the one most often employed in this clinic. However, certain benefits were thought by Dr. Walter Dandy of Johns Hopkins to be obtained by using a posterior fossa approach to the trigeminal posterior root, a concept now being pursued with renewed interest since the advent of the operating microscope. Dr. Meirowsky has preferred the posterior fossa operation and he will discuss the merits of this technic.

DR. ARNOLD MEIROWSKY: It has been my practice to employ differential section of the posterior root of the fifth cranial nerve in the cerebellopontine angle, as was first described by Walter Dandy in 1925. By using the lateral recumbent, modified "Mount" position, and by instituting continuous spinal drainage during the operation, excellent exposure of the fifth cranial nerve can be obtained. In recent years, I have used the surgical microscope when doing the actual differential section of the nerve, finding that its employment affords substantial improvement of the surgical technique.

The main advantages of this approach have been clearly defined by Dr. Dandy in his original writings. The distinct preservation of sensory perception in the face represents the most important advantage. The fact that a substantial degree of skin sensation can be preserved by doing the differential section of the nerve close to the pons, was clearly and lucidly pointed out by Dandy in 1925, belittled by many in subsequent years and experimentally proved by Peter Jannetta recently. Having had the opportunity of reexamining some of my patients five, ten, fifteen, and twenty years after surgery, I have found persistent relief of pain and equally persistent preservation of a considerable degree of cutaneous sensory perception in all of them.

DR. MEACHAM: Probably one reason for the posterior approach being used so infrequently in the past has been the concern about an increased morbidity, since this technic in-

volves a longer operation and involves a somewhat greater risk, especially in the very elderly. There have been, however, other innovative surgical attempts to relieve the pain and yet preserve facial sensation. Most of us have employed, at one time or another, the operation of trigeminal decompression, which Dr. Scheibert has employed frequently.

DR. DAVID SCHEIBERT: The incidence of trigeminal neuralgia requiring surgical relief should now be increasing after the initial introduction of Tegretol. The Taarnhoj procedure or trigeminal decompression by the intradural approach, as modified by Wilkins, has proven a good and usually lasting surgical method for the relief of trigeminal neuralgia.

The reason for the effectiveness of the trigeminal decompression is not obvious, although there is certainly some degree of compression of the ganglion and massage of the trigeminal root in carrying out the procedure. Thus far, there have been no recurrences of neuralgia in those patients so treated by decompression over an eleven-year period. The primary advantage to trigeminal decompression is the usual saving of almost, if not all, of trigeminal function, particularly in those cases with ophthalmic involvement. The absence of recurrence has been gratifying, but should recurrence present itself, another type of surgical approach can be used easily.

Complications with the intradural approach to the trigeminal decompression are minimal, but this approach is probably attended by a slightly higher morbidity in terms of drowsiness and headache and occasionally dysphasia when the dominant side of the brain is involved. However, retraction can be minimized by use of mannitol or urea. Of approximately thirty patients, one, a male in his seventies, developed a progressive intracerebral temporal hematoma three days after surgery with loss of life in spite of surgical evacuation of the hematoma. Diplopia has occurred temporarily in one patient and possibly permanently in one, with diplopia being of vertical nature in spite of visualization of the trochlear nerve which was intact. In both cases with diplopia, Tegretol had been used previously. Herpetic lesions tend to occur with the same frequency as seen in other surgical approaches to the neuralgic problem. In one patient, serious impairment of ophthalmic sensation occurred with an annoying hypersensitivity of the lips.

Important points in surgical technique would seem to be operating in the lateral supine position along with use of mannitol or urea to aid in operative exposure. The advent of angled clips has made clipping of the petrosal sinus easier with less danger of damage to the trigeminal root. Posterior incision through the free edge of the tentorium should be far enough back to avoid damage to the trochlear nerve as it enters the tentorium and one cannot help but wonder whether this posterior extension is necessary. Again the primary advantage of the trigeminal decompression would seem to be the ability to relieve pain while leaving neurological function fairly intact. It is possible now to secure this same effect by a "non-operative" method of electrodesiccation of the ganglion cells, but it has not yet been employed here to my knowledge.

DR. JAMES HAYS: This form of treatment for trigeminal neuralgia is fairly new and has not been utilized in this area. This is done by the stereotactic placement of an electrode in the ganglion and the use of radiofrequency to produce the lesion. Accurate placement of the probe helps produce a segmental lesion and control of the temperature at the lesion preserves touch, motor, and proprioceptive functions and produces hypalgesia. This technique was used first for patients thought to be unsuited as candidates for the standard surgical procedures, but now, in some areas, it is being used as the primary treatment procedure. I am not aware of specific complications that have been described with the radiofrequency technique, but I would presume they would be similar to those observed with the other treatment methods.

DR. RAY HESTER: In addition to the usual complications associated with any operation, such as infection and hemorrhage, there are several things peculiar to rhizotomy for tic douloureux that should be mentioned here. In almost every operation for trigeminal neuralgia in which the ganglion is manipulated, there is a postoperative herpes eruption in the segment which has been disturbed mechanically. It usually is only a minor problem, but can at times be very troublesome if ulceration and infection occur.

Frequently, patients will complain of feelings of fullness or stuffiness in the ear that tend to persist for some time. This problem eventually disappears or the patient adjusts to it.



Also, occasionally, a peripheral type facial palsy will occur, apparently due to traction on the greater superficial petrosal nerve during the elevation of the dura or, in some cases, the ganglion of the seventh nerve itself may be exposed and be compressed when the dura is elevated. Fortunately, in most cases, this will clear eventually, but great care must be taken to prevent a keratitis. If the cornea is anesthetic as well, a tarsorrhaphy must be performed.

In addition to these complications, one must take care to preserve the motor branch of the fifth nerve. Otherwise, there may be malocclusion and asymmetry of bite. This becomes of paramount importance in that small group of patients who develop the disease on the opposite side of the face and who have suffered a motor root injury on the first operated side.

In the rare case, a persistent uncomfortable

dysesthesia may occur and prove recalcitrant to therapy.

DR. MEACHAM: This conference today certainly gives substance to the fact that there are "more ways than one to skin a cat." I am certain we have not exhausted all of the possible methods of treating this dreadful disorder, but have simply emphasized the most commonly employed neurosurgical technics. I think we each would agree that the abolition of this painful affliction will guarantee a grateful patient. However, those unfortunate individuals who have atypical facial pain, that is to say, *not* classical tic douloureux, should not be recommended for any of the procedures outlined here for fear of producing a permanent anesthesia dolorosa—a condition for which no relief has been found and which must be considered iatrogenic.

\* \* \*

## SAINT ALBANS PSYCHIATRIC HOSPITAL

Radford, Virginia

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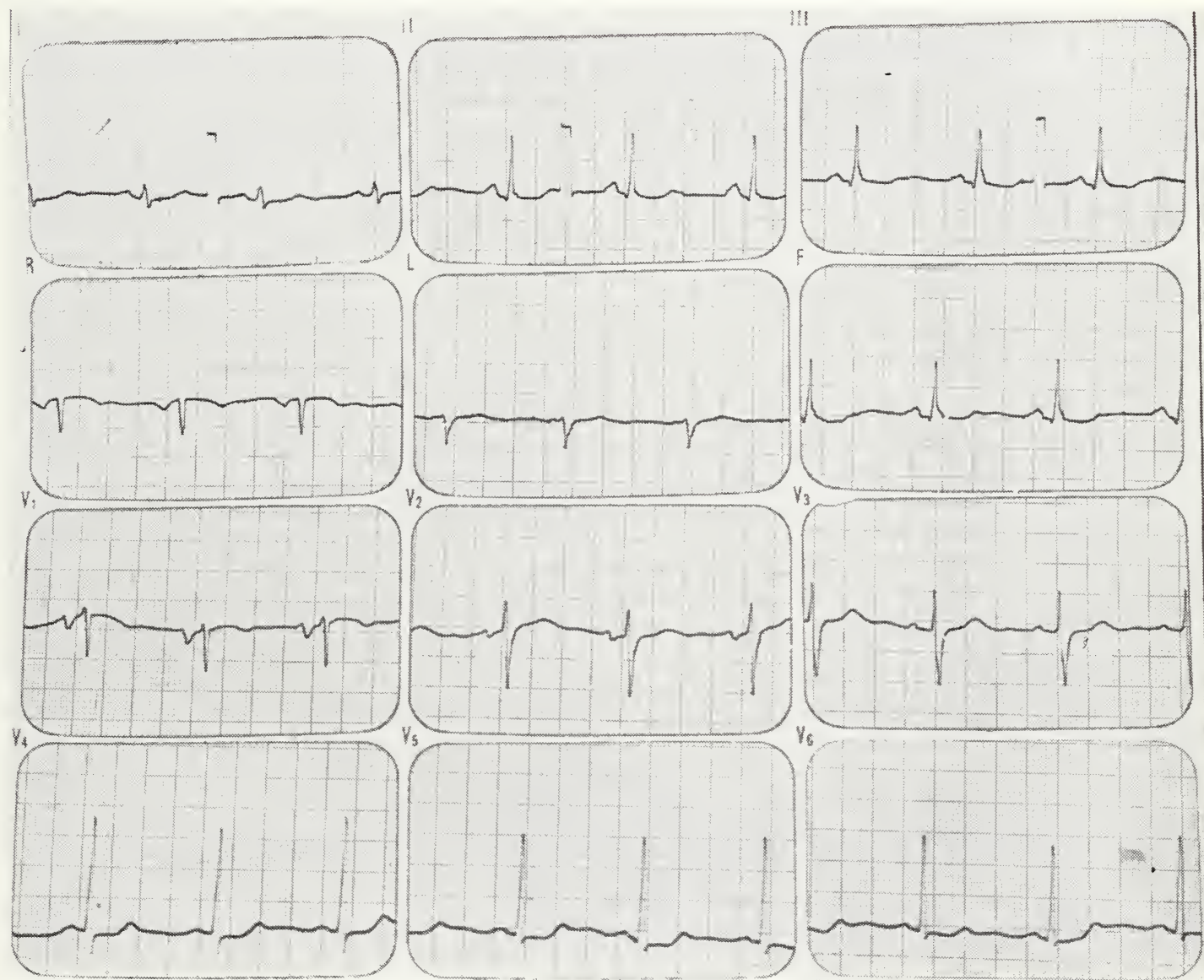
Asst. Administrator

### HISTORY

The patient is a 28 year old white woman who entered the hospital for evaluation of marked dyspnea with minimal exertion. Over the few weeks preceding admission, she noted shortness of breath when lying flat. A nonproductive cough had been present for two weeks. She was started on digitalis with no notable improvement in symptoms.

Physical examination revealed a very lean white

woman who was slightly tachypneic at rest. Blood pressure was 130/78. On examination of the chest, scattered basilar rales were present bilaterally. These did not clear with coughing or deep breathing. The arterial pulses were of normal intensity in all four extremities and in the carotid arteries. On palpation a left parasternal heave was present. Auscultation revealed a very loud first heart sound at the apex. A faint grade 1 diastolic rumble was present at the apex in the left lateral decubitus position. A grade 1-2 high pitched diastolic decrescendo murmur was present at the left sternal border. There are no systolic murmurs present. The remainder of the physical exam is unremarkable. The following electrocardiogram was obtained.



### DISCUSSION

The patient is noted to have a regular sinus rhythm at a rate of 73/min. The P-R interval is normal. The QRS forces are oriented normally in space and are of normal duration. The finding of interest on this electrocardiogram is the P wave. It is noted to be unusually broad, occupying 0.11 sec of the total P-R duration

of 0.16 sec. The normal upper limit of duration of P wave in adults above the age of 16 years is 0.10 sec. The Macruz criteria for diagnosis of atrial enlargement requiring that the ratio P/P-R segment be greater than 1.6 is met ( $P = 0.11 \text{ sec} / P\text{-R segment} = 0.05 \text{ sec}$ ). It is noted that the P wave is somewhat slurred in upstroke and is asymmetrically skewed to the right in lead II. The terminal component of the P wave is markedly posterior in the hori-

From St. Thomas Hospital, Department of Cardiology, Nashville, Tenn.



zontal plane causing a deeply inverted P wave in  $V_1$  and  $V_2$ . This negative P wave deflection (in excess of 0.04 sec duration) is a reliable sign of left atrial enlargement except in those patients who have chronic obstructive lung disease. The tracing, therefore, is presented as being representative of many of the classic features of left atrial enlargement. It should also be noted that there is slight coving of the ST segments compatible with digitalis therapy that this patient was taking at the time. Right and left heart catheterization in this patient revealed pulmonary arterial wedge pressures (reflecting left atrial pressures) which were only modestly elevated in the range of 18 mm Hg mean. The "a" wave was 21 with a "v" wave of 19 mm Hg. There was a 12 mm Hg resting end diastolic gradient across the mitral valve. Minimal aortic insufficiency was noted angiographically. A cardiac series disclosed modest left atrial enlargement.

The electrocardiographic pattern of atrial enlargement is felt to be due to an atrial conduction disturbance which most commonly accompanies atrial hypertrophy or dilatation. It may occur on occasion in the presence of normal left atrial pressures and in the absence of demonstrable atrial enlargement roentgenographically. In this patient with mitral stenosis of a moderate degree the atrial conduction abnormality demonstrated on this tracing is most probably caused by left atrial enlargement.

**FINAL DIAGNOSIS:** 1) Left atrial enlargement.  
2) Modest ST segment changes compatible with digitalis therapy.

W. BARTON CAMPBELL, M.D.  
HARRY L. PAGE, JR., M.D.  
Co-Directors

\* \* \*

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## The Use of Radioactive Xenon Gas in Nuclear Medicine\*

### Part I

#### Regional Pulmonary Function Studies

Radioactive Xenon gas has found its way into clinical nuclear medicine and its use seems to be increasing. Many doctors who have not used it but wonder whether they might reasonably do so, must ask themselves the following questions: Why use a radioactive gas? Where and how should it be used? Are the special problems one encounters with its use inordinately difficult to handle? It is to these questions that we address ourselves.

Although an inert radioactive gas ( $^{85}\text{Kr}$ ) was first used in 1955 to assess cerebral blood flow and in 1964  $^{133}\text{Xe}$  was first used for this same purpose, the use of inert radioactive gas for the study of pulmonary function developed quite independently. In 1935, Knipping in Germany first used inhaled  $^{133}\text{Xenon}$  to study regional pulmonary ventilation in patients. This excellent work was quickly pursued by doctors in Canada and in England who analyzed not only the regional distribution of inhaled  $^{133}\text{Xenon}$ , but also the regional distribution of  $^{133}\text{Xenon}$  following an intravenous injection of the gas. Although workers in the United States were not active in the investigation of pulmonary disease with  $^{133}\text{Xenon}$  until the mid-1960's, when they entered the field, they utilized the scintillation camera and essentially introduced a photographic representation of the data. While the use of the Anger camera coupled to rate-meters resulted in pictures that were admittedly only semi-quantitative, it represented an improvement over the data obtained with multiple one or two inch probes which, for a variety of technical reasons, was never as accurately quantitative as was touted by its proponents, and certainly was not as readily understood and appreciated by clinicians as a photograph.

The characteristics of Xenon gas that are the key to its utility in the study of pulmonary function are its marked insolubility in most liquids

(including blood) and its relative inertness. Because of these two characteristics, 95% of the Xenon dissolved in blood will leave the capillaries and enter the alveolar air spaces during the first passage through the lungs. This great insolubility of Xenon results in such rapid passage of gas from blood to alveoli and thence to the exhaled air that the normal biological half life of Xenon in man is less than 30 seconds. In turn, this short biological half life in man markedly reduces the radiation dose to the patient. In fact, a patient undergoing a Xenon study receives less radiation than with almost any other study performed on patients in nuclear medicine.

Xenon is about five times as heavy as air. Therefore, if it is to be exhausted to the outside after being exhaled by a patient, it should be exhausted from a reasonable height so that it will diffuse and disperse and not accumulate in a dependent area adjacent to the building. Fortunately for those nuclear medicine departments located underground, commercially suitable charcoal traps are now available. Even though there is a good deal of Compton scatter in bone at the 80 Kev gamma energy peak of  $^{133}\text{Xenon}$ , this does not present significant problems in quantitation of pulmonary function since: 1) there are large spaces between the ribs, 2) the quantity of isotope in lung is large relative to blood and other tissues and it is present for an adequate amount of time (30-60 sec.), 3) it is not necessary to quantitatively analyze very small regions, and 4) one does not need to deal with partition coefficients.

If a patient holds his breath following an intravenous injection of Xenon dissolved in saline, then the distribution of radioactive Xenon gas in alveoli indicates those alveoli which are being perfused. If the patient inhales Xenon gas mixed with oxygen, the relative activity in different regions of the lung during a single breath of tidal volume, at functional residual capacity, at total lung capacity, during a vital capacity measurement, and during washout can be evaluated. When these parameters of ventilation as well as the measurements of regional perfusion are related to lung volume, then sig-

\*From the Dept. of Nuclear Medicine, Parkview Hospital. Nashville, Tenn.



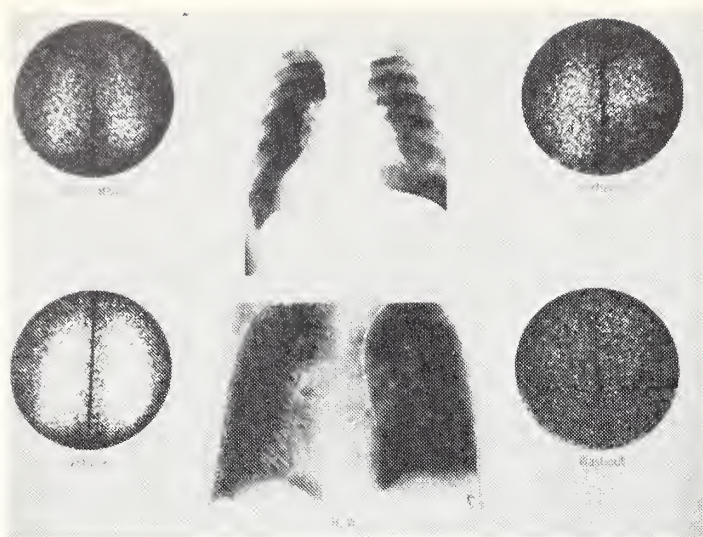


FIG. 1. Pulmonary embolus—right lower lobe (decreased perfusion; normal ventilation and volume)

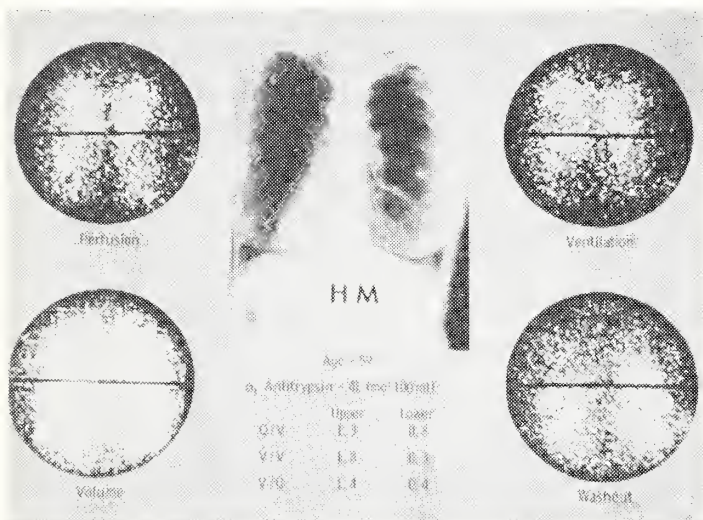


FIG. 3. Hereditary Pan Lobular Emphysema (upward shift of perfusion and ventilation, delayed washout at both bases)

nificant imbalances of perfusion and ventilation can be appreciated.

Since regional imbalance of perfusion and ventilation are very common and are the main cause of hypoxemia, these are probably the most important parameters of pulmonary function that can be measured. If these studies are performed on a patient in the upright position, then the gradient of perfusion from the bottom of the lung to the top of the lung can be used to evaluate pulmonary vascular pressure (particularly if it is elevated). If one carefully evaluates the washout of Xenon after perfusion and after ventilation, then regionally increased airways resistance can be appreciated. The equipment that is needed to perform these studies is an Anger camera, diverging collimator, closed spirometer system equipped with a large bell, CO<sub>2</sub> trap, oxygen supply, circulating fan, strip chart recorder, and an exhaust system. Most important of all, the physician responsible for the performance of these tests should have a

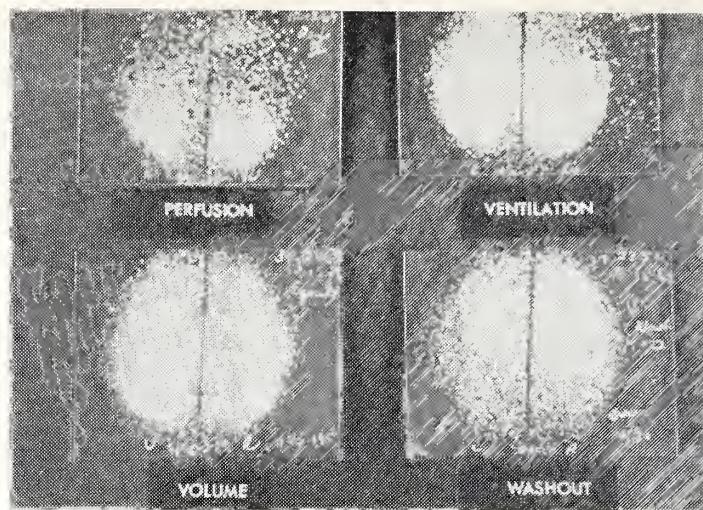


FIG. 2. Centrilobular emphysema—right upper lobe (decreased perfusion, decreased ventilation, normal volume, delayed washout)

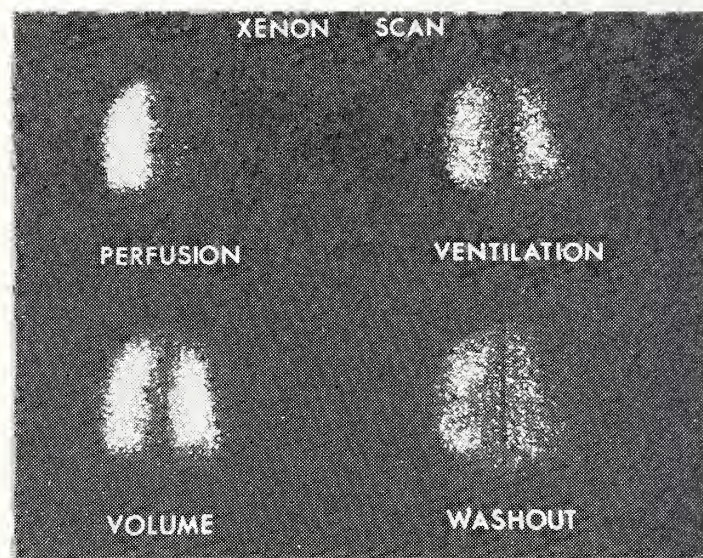


FIG. 4. Right Pulmonary Artery Atresia (severe reduction of perfusion, slight reduction in ventilation and volume)

good knowledge of pulmonary function.

In many <sup>133</sup>Xenon perfusion-ventilation studies, the simple qualitative evaluation of the pattern of distribution of ventilation and perfusion relative to volume is characteristic if not pathognomonic of specific disease entities. Pulmonary embolus (fig. 1), centrilobular emphysema (fig. 2), hereditary pan-lobular emphysema (fig. 3), and pulmonary artery atresia (fig. 4) are examples of this. In cases of carcinoma of the lung a disproportionate reduction of perfusion relative to volume and ventilation in the region of the malignancy may ominously predict the unresectability of the tumor. A Xenon study on patients with hypoxia will occasionally interdict surgery, will occasionally add an indication for surgery, and will almost always lead to a more rational approach to the therapy of lung disease.

ROBERT L. BELL, M.D.  
Director



## The Clinical Usefulness Of Isoenzyme Determinations\*

Since the recognition of lactate dehydrogenase (LDH) isoenzymes in 1957, much work in this subspecialized field of diagnostic enzymology has taken place. Although the LDH isoenzymes remain the most completely studied and the best understood as regards their correlation with clinical disease states, close to thirty other enzymes have been investigated in this regard, only a few of which may be helpful in diagnosis at this time. Isoenzymes of a particular "parent" enzyme are separated by electrophoresis, and numbered in sequence, starting with the fastest-migrating (anodal) fraction. The relatively restricted organ or tissue specificity of the various isoenzyme fractions, compared with that of the total serum enzyme activity, enhance the diagnostic value of laboratory enzyme tests.

The most commonly encountered LDH isoenzyme patterns are widely familiar today. The fastest-moving (LDH<sub>1</sub> and LDH<sub>2</sub>) fractions predominate in myocardium, erythrocytes, and renal cortex, and thus typically increase in serum with destructive processes involving those organs (e.g., myocardial infarction, hemolysis, and renal infarction). A prominent rise in LDH<sub>1</sub> may be detected within a few hours following myocardial infarction, making this a diagnostically sensitive test. Hemolysis, particularly in the megaloblastic anemias, generally results in LDH<sub>1</sub> and LDH<sub>2</sub> elevations, often of very great magnitude. Paradoxically, in various chronic renal diseases the elevation occurs in the LDH<sub>5</sub> fraction, suggesting its origin from the renal medulla, rather than the cortex. The high total LDH in malignant diseases generally results from elevations in LDH<sub>2</sub>, LDH<sub>3</sub>, and LDH<sub>4</sub>; occasionally only an isolated high LDH<sub>3</sub> is seen—an ominous laboratory finding. High tissue levels of LDH<sub>4</sub> and LDH<sub>5</sub> in skeletal muscle and liver result in the serum elevations of these fractions as seen in skeletomuscular trauma and acute hepatitis. Multiple fraction

elevations are perhaps the most commonly encountered pattern, and suggest damage to several organ systems, such as seen in shock, widespread malignancy, and congestive heart failure following myocardial infarction. Occasionally "aberrant" isoenzyme bands are encountered in malignant diseases, and various gonadal malignancies have reportedly mimicked a classical myocardial infarction pattern.

Alkaline phosphatase isoenzymes have proved rather disappointing diagnostically, due largely to major technical difficulties in their separation and identification. While still predominantly useful in research, electrophoretic analysis combined with certain physiochemical procedures may be of value in clinical laboratory diagnosis. Four major tissue components comprise most of the total serum activity—hepatobiliary, skeletal, intestinal, and occasionally, placental. The first two, diagnostically the most important, are unfortunately poorly separated by electrophoresis, which accounts for much of the confusion in pattern interpretation. By considering other parameters of hepatic function (for example, the gammaglutamyl transpeptidase, which is frequently elevated in obstructive hepatobiliary disease but rarely affected by osseous skeletal disorders), one increases the diagnostic usefulness of alkaline phosphatase isoenzyme separation.

Total creatinine phosphokinase (CPK) levels are an early, sensitive indicator of myocardial damage, but may also indicate other types of tissue damage (e.g., skeletal muscle injury). Three major tissue isoenzyme bands of CPK have now been identified—brain, heart, and skeletal muscle. However, there is some electrophoretic similarity in the last two fractions, and as yet this type of analysis has not improved upon the diagnostic specificity or sensitivity of the simple total CPK determination. It has occasionally been useful in identifying the source of the elevated serum fractions in various disorders such as hypothyroidism (myocardial and skeletal muscle) and cerebral injury (brain fraction and/or skeletal muscle).

Few other isoenzyme analyses have significant diagnostic value at this time. The SGOT has

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been found to consist of two isoenzyme fractions, while SGPT apparently exists only in a single active form. Separation of salivary and pancreatic amylase isoenzymes may eventually be helpful in determining the tissue origin of an elevated total serum amylase, and leucine aminopeptidase has been similarly studied in attempts to distinguish between intrahepatic and extrahepatic disorders. The simple biochemical methods for distinguishing between prostatic

and non-prostatic acid phosphatase have so far largely negated the value of determination of serum acid phosphatase isoenzymes. Isoenzymes of aldolase, isocitrate dehydrogenase, malate dehydrogenase, cholinesterase, and gamma-glutamyl transpeptidase have been identified, and may in the future be of value in clinical laboratory diagnosis.

DEAN G. TAYLOR, M.D.



## from the tennessee department of mental health

### The Physician's Assistant In a Psychiatric Hospital

Nurses and aides trained to assist psychiatrists in the care of the mentally ill have been recognized for some years and their role is quite well-established. They along with psychiatrists, social workers, and others constitute the treatment team which assumes responsibility for newly-admitted patients.

For the acutely ill, the teams categorize patients, establish therapeutic regimens, both psychiatric and pharmaceutical, with the objective of discharging the majority to their home community, under the care of either a family physician or a mental health clinic. A high rate of discharge is attained for the acutely ill in all age groups. The psychiatric team obtains less definitive results in a second category of patients—those who relapse after treatment, or suffer from such degree of mental disease that they ultimately need to spend many months, if not the remainder of their life, in a mental institution, psychotic behavior controlled by psychotropic drugs. Among these are patients who have schizophrenia, severe degrees of manic-depressive disease, mental retardation, or chronic brain syndrome of whatever cause. The psychiatric team manages these patients to the point of controlled living in an institution.

Finally, there is a portion of the population in the hospital for the mentally ill whose chronic disease often is more physical than mental or of about equal proportion. These patients are dis-

abled partially or completely by chronic brain syndrome—of whatever cause, by cerebral vascular disease, or seizures of many years duration. These as well as the chronically ill patients having schizophrenia, manic-depressive disease, or who are mentally deficient will, as they grow old in the institution, become subject to "heart disease, stroke, and cancer" as any other portions of the aging population. Whereas, non-psychotic persons are admitted to community hospitals for episodic treatment, to be followed at home or in the doctor's office, patients in mental institutions need episodic management and continued follow-up care *within* the institution in most instances—actually nursing home care. Additionally, there are numbers of patients having neurologic disabilities *without* mental disease who end up in these hospitals because there is no other place for them, for example those who have residua of strokes, Huntington's chorea, parkinsonism, and the like.

It is this third category of patients to which this discussion is directed. They divert the energies and activities of the psychiatric team from their primary function of treating the mentally ill, to supervise routine nursing care and to direct medical, surgical, or rehabilitative management of these patients, more physically ill than mentally ill. *Psychiatric effectiveness is diluted thereby.*

Few today argue with the concept that there is a shortage of physician manpower which will become enhanced with universal health care, as



demands for elective medical care expand. Additionally, it is no secret that psychiatric and medical care in state-supported institutions for the mentally ill is only occasionally ideal. The *National Observer* aired this topic as a front-page story recently (December 2, 1972). A couple of years ago in this *Journal*, Goshen<sup>1</sup> reviewed the historical developments which account for a lower level of quality in patient care in state hospitals and the current trends in treatment of the mentally ill.

It is a foregone conclusion that, given a form of universal health care which will be with us shortly, governmental surveillance for quality ultimately will include the state hospitals, as already spelled out for the private practice of medicine. The dilution of psychiatric treatment by the burden of providing care for the chronically ill will not be countenanced.

All this leads to the physician's assistant who could accept *much* responsibility in our public institutions, psychiatric or other. Even government approves (under Medicare) as little as one visit by a physician to his patient in a nursing home per month. (An interesting contretemps are attempts by payors for government to refuse allowance of more than one visit for episodic disease, say of pneumonia, by the physician attending a patient in a nursing home.) A physician's assistant, and especially a nurse, with a certain amount of postgraduate education and training will be able to *provide better care* for the chronically ill than a physician. This is said advisedly since she has the basic "know-how" of making a patient comfortable. She readily may be educated to recognize basic symptoms and signs and to the use of a limited number of laboratory and other technical examinations for the "99%" of the clinical problems met in a nursing home environment. Similarly, she may be taught the therapeutic armamentarium essential to such a group of patients, even though the ultimate responsibility will need to rest on the shoulders of the visiting physician.

This statement of the potential of a nurse physician's assistant is based upon a limited experience on a 60-bed infirmary at Central State Psychiatric Hospital. I believe this can confirm an established and on-going experiment for a decade of the nurse as a practitioner in ambulant chronic disease care as established in Memphis. Dr. John W. Runyan, Director of Health Care Delivery, University of Tennessee College of Medicine, has developed such a sys-

tem based upon the City of Memphis Hospital and the Shelby County Health Department.<sup>2</sup> Some 85% of these patients fall into three categories,—diabetes mellitus, cardiac and hypertensive disease. Dr. Runyan has gradually extended the diagnostic and therapeutic training for the public health nurses in that program as the proof of nurses' competence has become established.

Much has been written upon the topic of the physician's assistants since the inception of the program at Duke University Medical Center in 1965. In an editorial in this journal two years ago, I reviewed the thinking by the medical and legal professions and medical organizations as of that time.<sup>3</sup> It has not changed much since then. In that editorial, I ended with the statement that, "I believe a specially trained nurse in consultation with a doctor, could manage the medical problems in private or public institutions, equally well or in some respects even better than a physician making hurried rounds." I contend that a nurse physician assistant may assume responsibility for the major portion of the management of the chronically ill patient with the advice and consultation of the "rounding" consultant periodically, be he psychiatrist or part-time internist or family physician. There will need to be a solution to this problem of the chronically ill in the accredited psychiatric hospital so the psychiatrist may fulfil his responsibilities without the burden of caring for the patient who is in need only of custodial care whether for mental or physical disability.

In meeting the argument that nurse manpower shortage should not be aggravated further by the development of a cadre of nurse practitioners, at least a partial answer lies in an attempt to attract some of the 280,000 inactive nurses of this country back into a productive medical life, after children are grown, and into a new area which may be carried out on the basis of a daytime shift.

R. H. KAMPMEIER, M.D.

Medical Director, Central State  
Psychiatric Hospital, Nashville

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2. Runyan, Jr., John W: The public health nurse as a practitioner in chronic disease care, *South Med* 60:15-19, 1972.
3. Editorial: Physicians' assistants, *J T M A* 64:56-57, 1971.



**The Cooper Quiz\***

(Answers found beginning on page 292)

**Answer true or false unless otherwise indicated**

1. A careful follow-up should be done on all patients having halothane anesthesia. Evidence of liver toxicity does not contraindicate its further use after complete recovery from the toxicity.
2. Strontium 87m is an accurate scanning agent in children suspected of infection in either bones or joints.
3. Echocardiography is relatively specific for right ventricular overload secondary to atrial septal defects.
4. In reality echocardiography is a good screening test but not specific enough to differentiate all the defects that produce right ventricular overload.
5. Laryngeal cancer is about equally divided between men and women who have the same smoking patterns.
6. A nonfunctioning thyroid nodule in men should be treated surgically.
7. Separating catheter-associated urinary tract infection patients from non-infected patients does nothing to decrease the risk of infection.
8. Oral contraceptives may affect B<sub>12</sub> and folate metabolism and produce a megaloblastic anemia.
9. When women taking oral contraceptives have a low B<sub>12</sub> serum concentration, oral administration of folate will correct the deficiency.
10. Patients with hepatic cirrhosis who have ascitic fluid with a high protein content have significant impairment of portal blood flow to the liver.
11. The 25 year record of health and safety of atomic energy programs in the U.S. is (good) (poor).
12. There is some evidence that dexamethasone may produce cardiac arrhythmias where methylprednisolone sodium succinate is much less apt to.
13. A study done in Boston City Hospital indicates a 26 to 32 per cent error in cancer diagnosis. That is missed diagnosis.
14. The measurement of serum thyroxine as an indicator of the total hormone present is dependent on the protein bound portion of thyroxine.
15. Patent ductus arteriosus occurring in premature infants increases in incidence with increasing prematurity.

\*Published monthly by the Dept. of Medical Education, the Cooper Hospital, Camden, N.J., William T. Snagg, M.D., Director.

16. Patent ductus arteriosus in premature infants should not be treated surgically until after the first year of life.
17. Kidney patients on long-term dialysis are frequently hypoalbuminemic. Getting the blood albumin up to normal is not possible with high protein feeding but requires additional human albumin I.V.
18. Thiabendazole is effective in the treatment of both ascaris strongyloides and trichinella.
19. Patients with nontoxic goiter should be given iodine in relatively large doses.
20. Ouabain does improve left ventricular function in patients with acute myocardial infarct.
21. Bacterial concentrations exceeding a certain number of colonies per ml of urine are indicative that the infection is renal rather than lower urinary tract.
22. Reversible nonobstructive hydronephrosis does not occur without urinary-tract infection.
23. There is not even suggestive evidence that stilbesterol therapy causes endometrial carcinoma.
24. Headache and epistaxis are probably not more frequent in hypertensive patients than persons without hypertension.
25. There is evidence that if chloramphenicol is to be used in the therapy of H. influenzae meningitis, it should be given I.M., not orally.
26. There is a season influence on serum urate levels and even artificial sunlight can cause elevations.
27. One of the characteristics of the anemia of "chronic disorders" is an increase in bone marrow iron.
28. In the anemia of "chronic disorders" the reduction of albumin and transferrin is not related to the severity of the anemia.
29. Physical exercise, jogging one mile in 10 minutes, resulted in significantly reduced blood cholesterol levels.
30. Monitoring left ventricular filling pressure in patients with myocardial infarction is a useful endeavor. Keeping the filling pressure around 18 to 22 mm of Hg is about ideal.
31. In a long-term study of 150 patients with permanent ventricular pacemakers, it was interesting to note that those implanted before 1964 had a better survival rate than those after 1964.
32. Of the 26 patients with permanent pacemakers who developed congestive failure, 50 percent had a disease that was predisposing to failure.
33. You may assure patients that permanent pacing does not involve risks of mortality or morbidity appreciatively greater than the normal population.
34. Patients with diabetic neuropathy lose their capacity for marked digital vasoconstriction.
35. Keflin may be nephrotoxic and produce RBC abnormalities, but it does not affect blood platelets.
36. After treatment of hyperthyroidism and the production of euthyroidism, recurrent hyperthyroidism is not rare.  $T_3$  elevation may be the only increased iodoaminocid.



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executive  
director**

**J. E. BALLENTINE**

# MEDICAL DIGEST

NEWS OF INTEREST TO DOCTORS IN TENNESSEE

**ANNUAL MEETING NEXT MONTH TO BE ONE OF BEST . . .** Memphis, April 11-14, will have something interesting and informative for every doctor. Plan to attend and participate. THE ANNUAL MEETING PROGRAM IS PUBLISHED IN A SPECIAL COLORED SECTION IN THIS ISSUE OF THE JOURNAL . . . Note the important speakers on topics that affect every physician . . . And the many scientific and special events with outstanding speakers both on the general program and through the medical specialty societies . . . Note, too, the excellent entertainment at the President's Banquet, plus the dance to follow for your social events . . . This has to be one of the best, most outstanding, AND IMPORTANT, meetings ever sponsored in the history of the Association . . . Don't miss it!

\* \* \* \* \*

**POSTING RULES DROPPED . . .** Price schedules and signs are no longer required in the physicians' offices or in health care facilities. These have been removed with the changes made by the Price Commission. Phase III regulations recently published, continue wage and price controls on the health services industry, but revoked the Phase II regulations that required physicians and health institutions to provide an inspection schedule of charges for principal services, and to post a sign giving the schedule of charges.

\* \* \* \* \*

## MAJOR HIGHLIGHTS OF JANUARY TMA BOARD MEETING

**THIRTY-EIGHT ITEMS OF BUSINESS ACTED UPON BY THE BOARD . . .** The Trustees held the quarterly meeting in Nashville on January 13-14 . . . And appointed a Nominating Committee from the certified and ex-officio delegates from county societies. The Nominating Committee consists of nine physicians from the three grand divisions of the state to submit a slate of officers to be voted upon by the House of Delegates . . . The Board nominated three Tennessee physicians to receive the Distinguished Service Award; appointed one new director to serve on the Education and Research Foundation for Health Careers; appointed a physician to fill the vacancy on Medical Political Action body-IMPACT . . . And appointed, or reappointed, nearly 200 physicians to comprise the members of the Standing and Special Committees of the Association, these appointments to be confirmed at the April Board meeting at which time they will become effective.

\* \* \* \* \*

**BOARD MEETINGS TO BE INCREASED . . .** Due to the heavy schedule of work and increased activities of TMA, instead of conducting quarterly meetings, the Board will hold regular meetings on the second Sunday in the even numbered months of the year. This will increase meetings of the Board from four to six yearly.

\* \* \* \* \*



## **CERTIFICATE OF NEED LEGISLATION--AND COMPREHENSIVE HEALTH PLANNING . . .**

In further study on the issue of Certificate of Need legislation, the Board reaffirmed its position that TMA would favor Certificate of Need only where it pertains to in-patient hospital beds, acting further to convey this information to the Commissioner of Public Health . . . The Board went on record favoring that Comprehensive Health Planning remain under the State Public Health Department, and that Certificate of Need authority be placed within the Health Department, under the Hospital Licensing Board.

\* \* \* \* \*

**PHYSICIAN'S ASSISTANT LEGISLATION . . .** The Board studied a proposed Physician's Assistant bill prior to adopting a motion that the proposed bill be approved and forwarded to the TMA Legislation Committee for sponsorship in the General Assembly . . . Also, final approval was given to the Emergency Medical Technicians legislation, as amended, and referred this matter to the legislative Committee to be submitted in the General Assembly.

\* \* \* \* \*

**TMA RESOLUTIONS TO BE SPONSORED IN THE HOUSE . . .** Four resolutions were adopted for introduction in the House of Delegates. These included an informative resolution on Professional Standards Review Organizations (PSRO's); a resolution concerning difficulty with the Aetna Life and Casualty Insurance Company; a resolution on "Statement of Understanding," and another on utilization and peer review policy . . . The Board made several recommendations for clarification in the TMA Constitution and By-Laws and requested the Committee on Constitution and By-Laws to submit amendments for the House's consideration in April.

\* \* \* \* \*

**OTHER IMPORTANT ACTIONS . . .** The Board authorized sponsoring an eight-day Hawaiian adventure in March, 1973. This is in addition to the planned August tour to Scandinavia . . . Studied in depth guidelines concerning unlicensed physicians in Tennessee, two resolutions being submitted to the House by the TMA Judicial Council on this subject . . . Voted to support legislation wherein inspection of restaurants legislation should be under the direction of the Department of Public Health rather than that of Conservation . . . Heard a report on physician's union . . . Discussed the AMA National Leadership Conference and designated members of the Board to attend, this conference held February 16-18 in Chicago . . . Received a report of conflicting problems with physicians in Lawrence County with the County Health Department . . . Designated Dr. John Duckworth to represent the Board at the three-day March meeting of the Foundation for Medical Care Conference in Memphis . . . Studied the matter of Student Education Fund recipients defaulting on payments when student loans are due . . . Approved a program and materials to be used in TMA's stepped up physician recruitment program . . . Approved a uterine cancer task force program sponsored by the Tennessee Division of the American Cancer Society.

\* \* \* \* \*

**PRIMARY HEALTH CARE CENTERS . . .** The Board studied in considerable detail the material presented pertaining to experimental Primary Health Care Centers in the state. One or two such programs are already funded as an experiment. This topic was given considerable discussion. The Board acted to the extent that where a demonstrated need exists for a Primary Health Care Center, that the approval of the medical society that included the area be obtained.



**public  
service**



## **COMMUNICATIONS • LEGISLATION**

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**TMA TO EXPAND PHYSICIAN PLACEMENT SERVICE . . .** In an effort to retain more Tennessee trained MDs upon completion of their medical education, TMA's Placement Service has embarked upon a new recruitment endeavor. A concentrated and continuing effort will be made by TMA to keep residents and interns informed of the many practice opportunities available across Tennessee. By so doing, it is hoped that an increased number will choose to establish their practice in the State. As a means of communicating with residents and interns, TMA will periodically distribute a 4-color, 8-page brochure specifically designed to outline the many reasons why Tennessee is a good place to practice medicine. Included with the brochure will be a current sampling of practice locations available. These specific practice locations will be taken from those on file with the TMA Placement Service. Communities and/or TMA members who are in need of physicians are urged to contact TMA and to list their practice opportunity with the Placement Service. Hospital Administrators in the seventeen Tennessee institutions in which residency and internship programs are carried out have agreed to assist TMA in distributing the brochure and accompanying practice opportunity locations to the more than 950 MDs currently participating in their training programs.

\* \* \* \* \*

**FEDERAL JUDGE RULES TENNESSEE ABORTION LAW INVALID . . .** U.S. District Judge L. Clure Morton has declared Tennessee's 1883 anti-abortion statute unconstitutional. Judge Morton based his ruling on a recent U.S. Supreme Court decision in cases from Texas and Georgia which he said left no doubt that the State's law was invalid. Judge Morton permanently enjoined State Attorney General David M. Pack from the enforcement, operation and execution of the statutes involved. TMA President, William T. Satterfield, Sr., M.D. of Memphis, immediately appointed a Special Ad Hoc Committee to study the court's decision and its effect on Tennessee law and to make recommendations regarding Abortions in Tennessee in light of the court's ruling. Dr. C. Gordon Peerman, Jr. of Nashville, chairman of the TMA Board of Trustees, was designated chairman of the Special Committee. Also appointed were Drs. Russell T. Birmingham of Nashville, Anne U. Bolner of Fayetteville, Stewart A. Fish of Memphis, Eugene W. Gadberry of Memphis, W. Powell Hutcherson of Chattanooga, Sam P. Patterson of Memphis and John H. Saffold of Knoxville.

\* \* \* \* \*



**TENNESSEE PHYSICIANS ATTEND AMA LEADERSHIP CONFERENCE . . .** A sizable delegation of TMA members attended the first AMA National Leadership Conference held in Chicago, February 16-18. The purpose of the meeting was to provide interested physicians with the opportunity to develop new leadership skills, a better understanding of issues of particular interest to medicine, to review and discuss the many challenges confronting the medical profession in the year ahead and to formulate programs and strategies. Nine seminars were presented during the course of the meeting including one regarding PSRO (Professional Standards Review Organizations) and other aspects of H.R. 1, adopted by Congress last year. Tennesseans in attendance were Drs. William T. Satterfield, Sr., O. Morse Kochtitzky, J. Kelley Avery, E. Kent Carter, Tom E. Nesbitt, C. Gordon Peerman, Jr., George W. Holcomb, Jr., Olin Williams, T. K. Ballard, and Charles H. Alper; Flo Richardson, Les Adams and Hadley Williams were Medical Society Executives in attendance.

\* \* \* \* \*

**STATUS OF THE NATIONAL HEALTH SERVICE CORPS IN TENNESSEE . . .** Information from the Department of Public Health indicates that 11 Tennessee communities have received approval for physician assistance under NHSC (National Health Service Corps). Of the 11, physicians have located and begun practice in three areas. Daniel Bibleheimer, M.D. has been assigned to Adamsville (McNairy County), Dennis A. Savoi, M.D. has been assigned to Decatur (Parsons and Decatur County) and William R. Kenny, M.D. has been assigned to Surgoinville (Hawkins County). Four other MDs have accepted assignments and will begin practice in July, 1973 in the following communities: Jamestown (Fentress County), Kingston (Roane County), Spring City (Rhea County) and Surgoinville. In addition, two dentists have been assigned and have begun practice under the program. They are: Robert Abraham, D.D.S. in Celina (Clay County) and William Hendon, D.D.S. in Rutledge (Grainger County). The communities of Linden (Perry County), Lynchburg (Moore County), Monterey (Putnam County) and Wartburg (Morgan County) have been approved but no physicians have been assigned as yet.

\* \* \* \* \*

**TMA TO SPONSOR SCANDINAVIAN TOUR IN AUGUST . . .** A 14-day, three-country Scandinavian tour for TMA members and their families has been announced and will depart Nashville and Memphis August 3, 1973. The tour program, begun by TMA in 1970, has been well received by those who have taken advantage of the savings involved in group travel. The four countries and cities to be visited are Stockholm, Sweden; Helsinki, Finland and Copenhagen, Denmark. The tour price includes everything—chartered air transportation by private 707 jet, deluxe hotels, breakfasts at the hotel each morning and gourmet dinners at a choice of the finest restaurants each evening. All tips, transfers and other extras are taken care of for the traveler. Short side trips will be offered to Leningrad, Russia and to Oslo, Norway. Interested members are urged to forward their reservations immediately since they are processed on a first-come basis. Over 170 TMA members and their families have just returned from a one-week TMA sponsored trip to Hawaii.





# **ARE YOU ALL SET?**

138th Annual Meeting

April 11-14, 1973

Memphis

## Special Section

### SCIENTIFIC PROGRAM OF THE 138TH ANNUAL MEETING OF THE TENNESSEE MEDICAL ASSOCIATION

## General Information

The official program contains detailed information on the 1973 annual meeting of the Tennessee Medical Association, conducted in Memphis, Tennessee, April 11-12-13-14, 1973.

#### ◆ **Registration**

The registration desk will be located in the Sheraton-Peabody Hotel Lobby. All members, visiting speakers, interns, residents, exhibitors, and guests are urged to register. Admission to all meetings and sessions, and to the exhibits is by a badge obtained at the registration desk. **THERE IS NO REGISTRATION FEE.**

Programs for all activities during the Annual Meeting are available at the registration desk. Those eligible to register are: Members of the Tennessee Medical Association; physicians from other states who are members of their respective state medical associations; residents, interns, medical students and guests.

#### ◆ **Registration Hours**

(All times are Central Standard Time)

Wednesday, April 11, 10:00 A.M.

(Special registration for members of the House of Delegates from 10:00 A.M. to 5:00 P.M.)  
(Advance registration for exhibitors and early arrivals after 4:00 P.M.)

Thursday, April 12 .....8:00 A.M. to 5:00 P.M.

Friday, April 13 .....8:00 A.M. to 5:00 P.M.

Saturday, April 14 .....8:00 A.M. to 1:30 P.M.

#### ◆ **Annual Meeting Headquarters**

Headquarters are located in the Sheraton-Peabody Hotel, Memphis, where many activities are scheduled. The specialty societies will conduct their meetings concurrently with TMA in Memphis. These and other activities will be conducted in the Sheraton-Peabody Hotel and the Downtowner Motor Inn. Any locations where specialty societies are meeting outside of the Sheraton-Peabody or the Downtowner are listed in this program under the "Days" that the societies are scheduled to meet. The Woman's Auxiliary activities will be conducted entirely in the Albert Pick Motor Inn.

#### ◆ **TMA Headquarters Offices**

The TMA headquarters offices will be located during the meeting in the Sheraton-Peabody in Rooms, 302-306-310-315. The rooms where the offices are located will be easily identified by signs.

A member of the staff will be available to assist you at all times. Members of the House of Delegates, Officers, and Reference Committee Chairmen can obtain secretarial help when needed. Your headquarters office staff is available to assist you in your needs.

J. E. BALLENTINE, Executive Director

L. HADLEY WILLIAMS, Assistant Executive Director

DON ALEXANDER, Executive Assistant and Field Representative

WILLIAM V. WALLACE, Executive Assistant

JOHN R. COLES, Executive Assistant, Legislation

MISS LINDA BASS, Administrative Secretary

MRS. CAROLYN SANDLIN, Records and Bookkeeping

MRS. JANICE HARGIS, Secretary

MRS. JUDY POE, Secretary

MISS JUDY SMITH, Secretary

#### ◆ **President's Reception and Banquet**

The President's Banquet will be preceded by the President's Reception, sponsored by the Tennessee Medical Association, and beginning at 6:00 P.M. on Friday evening, April 13, in the Sheraton-Peabody Hotel.

The BANQUET will follow at 7:00 P.M. in the Ballroom. **TICKETS ARE AVAILABLE AT THE REGISTRATION DESK.** A limited number can be accommodated. **GET YOUR TICKETS EARLY.**

#### ◆ **Communications—**

##### **Emergency Telephones**

**Memphis 525-8445 and 525-8446**  
(Area Code 901)

A blackboard will be placed in a conspicuous location on the mezzanine floor in the Sheraton-Peabody Hotel where doctors' calls will be listed. **PLEASE CHECK OFTEN WITH THE LISTINGS ON THE CALL BOARD.** The emergency telephones will be on the mezzanine floor of the Sheraton-Peabody, near the exhibit area.

#### ◆ **Specialty Society Luncheon Tickets**

Tickets to specialty society banquets and luncheons, as well as the Woman's Auxiliary affairs, can be obtained from Specialty Societies respective registration desks. **PURCHASE YOUR TICKETS AT THE TIME OF REGISTRATION.** The number that can be accommodated is limited.

#### ◆ **House of Delegates**

The first session of the House of Delegates will be convened on Wednesday afternoon, April



11, beginning at 4:00 P.M. in the Sheraton-Peabody. The second session will be held on Saturday, April 14, beginning at 9:00 A.M. in the Sheraton-Peabody. Reference Committees will meet on Thursday, April 12, and the locations of the Reference Committee rooms are listed below. *Any TMA member may appear before a Reference Committee to testify on the business before the House of Delegates.*

◆ **Reference Committee Meeting Rooms—House of Delegates**

Reference Committee on Constitution and By-Laws .....	Room 202
Reference Committee (A) .....	Room 215
Reference Committee (B) .....	Room 213
Reference Committee (C) .....	Arkansas Room 345-351
Reference Committee (D) ..	Mississippi Room 339-343

(The Reference Committee on Outstanding Physician of the Year will meet in the TMA offices on Wednesday.)

Reference Committees will conduct their hearings beginning at 9:00 A.M. on Thursday, April 12.

◆ **General Meetings—TMA**

The general presentations at the 138th TMA annual meeting will be presented on Friday morning, April 13. (See complete program under the "Days" as listed herein.) The specialty societies meeting concurrently with the Tennessee Medical Association will conduct their scientific and business programs on April 12, 13 and 14. Please note the program listing the scientific meetings of all specialty societies each day. Every member registered is welcome to attend any scientific meeting of the specialty societies. Of special interest will be the presentations of general interest by guest speakers on Thursday, Friday and Saturday, April 12-14. Please note topics and outstanding speakers listed in this program.

◆ **Specialty Societies**

Sixteen specialty societies will be conducting their meetings concurrently with the Tennessee Medical Association in Memphis. Scientific and business sessions of the specialty societies will be held on April 12-13-14. SEE DETAILS IN THIS PROGRAM LISTED UNDER EACH OF THE ABOVE DATES AND UNDER "ANNOUNCEMENTS."

◆ **Woman's Auxiliary**

The TMA Woman's Auxiliary will conduct all sessions of its annual meeting at the Albert Pick Motor Inn, Memphis. The registration desk of the Auxiliary will be located in the Albert Pick Motor Inn, and all committee meetings, board meetings, and general sessions will be conducted in the designated rooms at the Albert Pick Motor Inn.

◆ **Exhibit Attendance Prize**

To encourage greater physician participation in the technical exhibits, the exhibit committee continues a feature for 1973. TMA will give away to a lucky physician, a Portable Color Television, as a Exhibit Attendance Prize. To qualify, each registered physician is required to visit a minimum of thirty technical exhibitors. The drawing will be held Saturday (April 14) afternoon at 1:00 P.M. in the exhibit area. Instructions for participating will be given each physician at the time of registration.

◆ **Scientific Exhibits**

Physicians desiring to present scientific exhibits will locate these in the exhibit area of the Sheraton-Peabody Hotel.

◆ **Technical Exhibitors**

The technical exhibits will be located on the Mezzanine and lobby floors of the Sheraton-Peabody Hotel. They may be visited each day of the Annual Meeting beginning on Thursday, April 12, from 9:00 A.M. until 5:00 P.M.—and continued from 9:00 A.M. until 5:00 P.M. on Friday, April 13. The exhibits will be open from 9:00 A.M. until 1:30 P.M. on Saturday, April 14.

The exhibitors are an important part of the 138th Annual Meeting, and each physician is urged to spend a part of his time visiting and inspecting the products and services of the exhibitors. The exhibits will display many educational features of medical supply and the latest developments in scientific undertaking. Also, many exhibitors will be presenting their services that are essential to the practice of the physician.

## TECHNICAL EXHIBITORS PERSONNEL

Representatives of the companies listed will be present in the exhibit area each day, to discuss the displays which will be on exhibit. This will give each registrant an opportunity to discuss products and services displayed with trained personnel in a relaxed atmosphere and to have a leisurely visit with the local detail man who can normally be seen only between patients.

**Visit Exhibitors**—Through their rental of exhibit space, the commercial firms have greatly assisted in financing the 1973 annual meeting. Every physician should show his appreciation by visiting every exhibit.

**Hours**—Exhibitor representatives will be on duty from 9:00 a.m. to 5:00 p.m. each day—Thursday through Friday, and from 9:00 A.M. 'til 1:30 P.M. on Saturday.

The newest developments in pharmaceuticals, supplies, equipment and services will be on display, with complete information available.

All physicians will find their time well spent in visiting exhibits and keeping abreast of what is



new and useful. *YOUR ATTENDANCE IS URGED*, for your benefit as well as for an expression of cooperation with our exhibitors.

### VISIT THE EXHIBITS

All scientific meetings will be recessed twice for thirty minutes on each day to give doctors an opportunity to visit with the exhibitors.

WILLIAM V. WALLACE  
*Exhibit Manager*

ABBOTT LABORATORIES North Chicago, Illinois	Booth 54
ACME VISIBLE RECORDS, INC. Nashville, Tennessee	Booth 36
AMES COMPANY Div. Miles Laboratories Elkhart, Indiana	Booth 35
ARNAR-STONE LABORATORIES, INC. Mt. Prospect, Illinois	Booth 56
AYERST LABORATORIES New York, New York	(Lobby) Booth 3
BLUE CROSS-BLUE SHIELD Chattanooga, Tennessee	Booth 55
BRISTOL LABORATORIES Syracuse, New York	(Lobby) Booth 12
COCA-COLA COMPANY Memphis, Tennessee	Booth 41
DePUY MANUFACTURING COMPANY Warsaw, Indiana	(Lobby) Booth 13
DICTAPHONE Rye, New York	(Lobby) Booth 2
DOW PHARMACEUTICALS Indianapolis, Indiana	Booth 25
EQUITABLE LIFE ASSURANCE SOCIETY Nashville, Tennessee	Booth 23
FARRINGER AND COMPANY Nashville, Tennessee	Booth 42
FLINT LABORATORIES Deerfield, Illinois	Booth 26
HOECHST PHARMACEUTICAL COMPANY Somerville, New Jersey	(Lobby) Booth 1
HOFFMANN-LaROCHE Nutley, New Jersey	Booths 37 & 38
INTRAV St. Louis, Missouri	Booth 47
INVESTMENT RETIREMENT TRUST (Denby Brandon Company) Memphis, Tennessee	Booth 50
LANIER BUSINESS PRODUCTS Atlanta, Georgia	Booth 20
ELI LILLY AND COMPANY Indianapolis, Indiana	Booth 44
MEMPHIS REGIONAL MEDICAL PROGRAM Memphis, Tennessee	Booth 21
MUTUAL BENEFIT LIFE INSURANCE (Dunn-Lemly-Sizer) Nashville, Tennessee	Booth 43
NASHVILLE SURGICAL SUPPLY Nashville, Tennessee	Booth 51

ORTHO PHARMACEUTICALS Raritan, New Jersey	Booth 40
PARKE, DAVIS AND COMPANY Detroit, Michigan	Booth 48
PFIZER LABORATORIES Doraville, Georgia	Booth 22
PHYSICIANS BUSINESS BUREAU Nashville, Tennessee	Booth 53
WILLIAM P. POYTHRESS & COMPANY, INC. Richmond, Virginia	Booth 49
A. H. ROBINS COMPANY Richmond, Virginia	(Lobby) Booth 4
W. B. SAUNDERS COMPANY Philadelphia, Pennsylvania	(Lobby) Booth 6
SCHERING LABORATORIES Kenilworth, New Jersey	Booth 46
SMITH, REED, THOMPSON & ELLIS COMPANY Nashville, Tennessee	Booth 57
E. R. SQUIBB AND SONS Princeton, New Jersey	Booth 52
STEWART OXYGEN SERVICE Memphis, Tennessee	Booth 45
STUART PHARMACEUTICAL Wilmington, Delaware	Booth 19
TENNESSEE GUILD OPTICIANS Nashville, Tennessee	Booth 24
TENNESSEE MID-SOUTH RMP Nashville, Tennessee	(Lobby) Booth 7
UPJOHN COMPANY Memphis, Tennessee	Booth 39
UNIVERSITY OF TENNESSEE Continuing Medical Education Memphis, Tennessee	Booth 30

The Tennessee Medical Association greatly appreciates the support of the following pharmaceutical company in lieu of an exhibit.

GEIGY PHARMACEUTICALS  
Ardsley, New York

## Announcements SPECIAL EVENTS AND FEATURES

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### PRESIDENT'S RECEPTION AND BANQUET

FRIDAY, APRIL 13—7:00 P.M.

President's Reception—6:00 P.M.

Sponsored by TMA

WM. T. SATTERFIELD, SR., M.D., *President*,  
Presiding

Introduction of President-Elect—

O. Morse Kochtitzky, M.D.

Special Awards:

Presenting Tennessee's Outstanding Physician of  
the Year—By Robert H. Haralson, Jr., M.D.,  
Speaker of the House of Delegates



Presenting the Distinguished Service Award—  
By: C. Gordon Peerman, Jr., M.D., Chairman,  
Board of Trustees

Presenting Health, Project Contest Winner—By:  
James W. Hays, M.D., Treasurer

The banquet is for TMA members, their wives  
and guests. Join your friends in dining and  
dancing to the music of Tony Barrasso and his  
orchestra.

The evening's entertainment will be the national-  
ly rated musical group "The Stonemans." This is a  
popular music group, known and appearing on  
such productions as the Tonight Show, Danny  
Thomas Special, Grand Ole Opry and numerous  
others.

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#### Public Health Council

The meeting of the Public Health Council will  
be held in Room 314, Sheraton-Peabody Hotel on  
Friday, April 13. The meeting will begin at 10:00  
A.M. Members of the Public Health Council will  
be advised of other details of the meeting.

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#### Please Reserve Luncheon Tickets Early

A number of the specialty societies meeting with  
TMA will sponsor luncheons during the Annual  
Meeting.

*PLEASE MAKE RESERVATIONS FOR  
LUNCHEONS YOU ARE PLANNING TO AT-  
TEND.* (These should be made with the secretary  
of the respective specialty society.)

### TENNESSEE CHAPTER AMERICAN COLLEGE OF SURGEONS

Thursday, April 12, 1973

12:00 Noon

#### COUNCIL LUNCHEON

Room 314

Sheraton-Peabody

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#### COLOR TV—PRIZE

Don't forget to obtain your instructions and card  
to be punched by the exhibitors so that you will  
have a chance on the drawing for the portable  
color television. The drawing will be held Satur-  
day Afternoon, April 14th. Complete details can  
be obtained at the registration desk.

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### MEDICINE & RELIGION COMMITTEE BREAKFAST

Saturday, April 14

7:00 A.M.

Venetian Room

Sheraton-Peabody Hotel

The speaker will be J. Frank Walker, M.D.,  
Atlanta, Georgia. Dr. Walker is the speaker of the  
AMA House of Delegates.

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### Tennessee Chapter—American College of Surgeons—Banquet

The Tennessee Chapter of the American College  
of Surgeons will conduct their Social Hour at 6:30  
P.M., and the banquet at 7:30 P.M. on Thursday  
evening, April 12 in the Continental Ballroom of  
the Sheraton-Peabody Hotel.

TMA MEMBERS AND THEIR GUESTS ARE  
INVITED TO ATTEND THE SOCIAL HOUR  
AND BANQUET.

#### NOTICE

(First Session)

#### HOUSE OF DELEGATES

Wednesday, April 11

Forest Room

Sheraton-Peabody

4:00 P.M.

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#### NOTICE

#### Scientific Presentations

The scientific presentations of all of the specialty  
societies meeting concurrently with the Tennessee  
Medical Association, are open to all physicians  
registered at the Annual Meeting. Attend the  
meeting of your choice.

#### Technical Exhibits

The technical exhibits are located in the exhibit  
area in the Sheraton-Peabody. They are open daily  
at 9:00 A.M.

#### TMA Board of Trustees Meeting

The TMA Board of Trustees will meet in Room  
202 of the Sheraton-Peabody Hotel at 9:00 A.M.  
on Sunday, April 15.

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### Tennessee—Trauma Committee and Emergency Medical Service Committee

Friday, April 13, 1973

Luncheon—12:00 Noon

Room 213

Sheraton-Peabody Hotel

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#### IMPACT BREAKFAST

FRIDAY, APRIL 13, 1973

8:00 A.M.

Venetian Room—Sheraton-Peabody Hotel

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**Woman's Auxiliary to the  
Tennessee Medical Association  
45th Annual Convention  
April 12-14, 1973  
Albert Pick Motor Inn  
Memphis**

The Woman's Auxiliary to the TMA will conduct all sessions of its annual meeting at the Albert Pick Motor Inn with the exception of Friday's luncheon and general session. The registration desk of the Auxiliary will be located in the Albert Pick Motor Inn, and all committee meetings, board meetings, and Saturday's general sessions will be conducted in the designated rooms at the Albert Pick Motor Inn.



**Arts and Crafts Exhibit and  
AMA-ERF Gift Shop**

The Arts and Crafts Exhibit of the Woman's Auxiliary will be located on the eleventh floor of the Albert Pick, Motor Inn. Arts and crafts will be accepted Thursday, April 12, from 2:00-5:00 P.M., and on Friday, April 13, from 9:00 A.M. until 12:00 Noon. Doctors and their families are urged to participate in the exhibit. The AMA-ERF Gift Shop will also be located on the eleventh floor. Items for sale will be donated by local auxiliaries to augment Tennessee's contribution to the AMA-ERF Fund.

**PROGRAM  
Thursday, April 12, 1973**

**SPECIALTY SOCIETIES**



**TENNESSEE CHAPTER  
AMERICAN COLLEGE OF  
SURGEONS**

12:00 NOON

**COUNCIL**

Luncheon Meeting

Room 314 Sheraton-Peabody Hotel

**GENERAL MEETING**

Forest Room Sheraton-Peabody Hotel

(All physicians attending the TMA meeting are invited to attend the scientific sessions of the Tennessee Chapter, American College of Surgeons.)

**SCIENTIFIC PROGRAM**

B. F. BENTON, M.D., *President, Presiding*

1:30 P.M.

**"Bacteroides Infections"**

By: EUGENE R. NOBLES, M.D., F.A.C.S., Memphis

1:45 P.M.

Discussion

1:50 P.M.

**"New Experiences in Treatment of Enterocutaneous Fistulas"**

By: JOHN E. KESTERSON, M.D., F.A.C.S., Knoxville

2:05 P.M.

Discussion

2:10 P.M.

**"Use of X-ray (Faxtron) in Operative Localization of Cancer of the Breast"**

By: ROBERT LERMAN, M.D., Memphis

2:25 P.M.

Discussion

2:30 P.M.

**"Ideal Bypass for Morbid Obesity"**

By: H. WILLIAM SCOTT, M.D., F.A.C.S., Nashville

2:45 P.M.

Discussion

2:50 P.M.-3:05 P.M.

*Intermission—Visit Exhibits*

3:05 P.M.

**"Management of Retained Common Duct Stones"**

By: ROBERT P. MCBURNEY, M.D., F.A.C.S., Memphis

3:20 P.M.

Discussion

3:25 P.M.

**"Carcinoma of the Skin in Black Patients"**

By: IRVIN D. FLEMING, M.D., F.A.C.S., Memphis

3:40 P.M.

Discussion

3:45 P.M.

**GUEST SPEAKER**

**"Results of Surgery for Coronary Artery Insufficiency in Myocardial Infarction"**

By: DENTON A. COOLEY, M.D., F.A.C.S., Houston, Texas

7:00 P.M.

**SOCIAL HOUR AND BANQUET**

Continental Ballroom

TMA members and their guests are invited to attend the Social Hour and Banquet. Make reservations early. Tickets available at registration desk.





**TENNESSEE ACADEMY OF  
OPHTHALMOLOGY**

**THURSDAY, APRIL 12, 1973**

**12:00 NOON**

**Grand Salon—East      Downtowner Motor Inn**

**LUNCHEON AND PANEL  
DISCUSSION**

**PANELISTS: FRED C. BLODI, M.D.**

**Iowa City, Iowa**

**J. BROOKS CRAWFORD, M.D.**

**San Francisco, California**

**DENNIS O'DAY, M.D.**

**Nashville**

**SCIENTIFIC PROGRAM**

**Grand Salon—West      Downtowner Motor Inn**

**1:10 P.M.**

**Meeting Called to Order**

**By: DAVID H. TURNER, M.D., *President***

**1:15 P.M.**

**"A Review of Malignant Melanoma of the Choroid"**

**By: ALBERT LAWS, M.D., DAVID MEYER, M.D.,  
and JERRY LUTHER, M.D., Memphis**

**1:35 P.M.**

**"Pseudoglioma—A Study in 2 Brothers"**

**By: LARRY R. MOORMAN, M.D., Chattanooga**

**1:50 P.M.**

**GUEST SPEAKER**

**"Malignant Orbital Tumors"**

**By: FRED C. BLODI, Iowa City, Iowa**

**2:50 P.M.**

***Intermission—Visit Exhibits***

**SCIENTIFIC PROGRAM**

***(Continued)***

**3:05 P.M.**

**"Tonometry—A Comparison of Methods"**

**By: LEE MULLIS, M.D., Chattanooga**

**3:15 P.M.**

**GUEST SPEAKER**

**"Hidden Carcinoma of the Ocular Adnexia"**

**By: J. BROOKS CRAWFORD, M.D., San Francisco,  
California**

**4:15 P.M.**

**"Photoinactivation of Ocular Herpes"**

**By: DENIS O'DAY, M.D., Nashville**

**4:30 P.M.**

**"Trabeculotomy and Trabeculectomy"**

**By: RICHARD BAKER, M.D., Memphis**

**★ ★ ★**

**TENNESSEE STATE  
ORTHOPAEDIC SOCIETY**

**THURSDAY, APRIL 12, 1973**

**Room 200**

**Sheraton-Peabody Hotel**

**SCIENTIFIC PROGRAM**

**9:00 A.M.**

**(Moderator: MOORE MOORE, JR., M.D., Memphis)  
WELCOME—B. G. MITCHELL, M.D., President**

**9:15 A.M.**

**"Locked Cervical Facets in Dislocated Cervical  
Spines"**

**By: WARREN CASTLE, M.D. and BRYAN NOAH,  
M.D., Nashville**

**9:35 A.M.**

**Discussion**

**9:45 A.M.**

**"Spine Fractures With Neurological Impairment—  
Anterior Decompressions and Stabilization"**

**By: DON GAINES, M.D. and ARTHUR BROOKS,  
M.D., Donelson**

**10:05 A.M.**

**Discussion**

**10:15 A.M.**

**"Results From the Use of Walldius Knee Joint  
Prosthesis"**

**By: DAVID JONES, M.D., Nashville**

**10:35 A.M.**

**Discussion**

**10:45 A.M.**

**"My Early Experience With the Modified Geo-  
medic Knee"**

**By: J. MACDONALD BURKHART, M.D., Knoxville**

**11:05 A.M.**

**Discussion**

**11:15 A.M.**



**R. S. BRYAN, M.D.**

**GUEST SPEAKER**

**"Polycentric and Geometric  
Total Knee Arthroplasty"**

**By: R. S. BRYAN, M.D.,  
Rochester, Minnesota**

**12:15 P.M.**

**LUNCHEON**

**Louis XVI Room      Sheraton-Peabody Hotel**

**SCIENTIFIC PROGRAM**

***(Continued)***



1:15 P.M.  
Room 200 Sheraton-Peabody Hotel  
(Moderator: W. L. MOFFATT, M.D., Memphis)  
"Promotion of Fracture Healing Strength By  
Electrical Stimulation"  
By: JOE ORTIZ, M.D., Nashville

1:35 P.M.  
Discussion

1:45 P.M.  
"Causal Relationship Between Avascular Necrosis  
of the Femoral Head and Degenerative Arth-  
ritis of the Hip"  
By: R. A. CALANDRUCCIO, M.D., Memphis

2:05 P.M.  
Discussion

2:15 P.M.  
"Management of the Severely Deformed Spine"  
By: DON GAINES, M.D., Donelson

2:35 P.M.  
Discussion

2:45 P.M.  
"Follow-up of Milwaukee Brace Treatment for  
Ideopathic Scoliosis"  
By: A. S. EDMONDSON, M.D., Memphis

3:05 P.M.  
Discussion

3:15 P.M.  
"Conservative Treatment of Both Bone Fractures  
of the Leg"  
By: W. C. HUTCHINS, M.D., Memphis

3:35 P.M.  
Discussion

6:30 P.M.  
**SOCIAL HOUR AND BANQUET**  
Memphis Country Club

★ ★ ★

**TENNESSEE THORACIC SOCIETY**  
THURSDAY, APRIL 12, 1973  
(HARRY L. DAVIS, M.D., *Secretary*—Presiding)  
Flagship Room Downtowner Motor Inn

1:15 P.M.  
"Coronary Artery By-Pass Surgery"  
Medical Aspects—DONALD R. EUBANKS, M.D.  
Surgical Aspects—JAMES W. PATE, M.D.  
Discussion

2:15 P.M.  
"The Dyspneic Patient"  
(JOHN P. GRIFFIN, M.D.—Moderator)  
Differential Diagnosis—WILLIAM I. MARIENCHECK,  
M.D.  
Laboratory Evaluation—WILLIAM A. POTTER, M.D.  
Adult Respiratory Distress Syndrome ("Shock  
Lung")—PHILIP E. DUNCAN, M.D.  
Discussion

3:15 P.M.  
*Intermission—Visit Exhibits*

3:30 P.M.  
"El Toro Session"  
(FRANCIS H. COLE, M.D.—Moderator)  
Presentation of Interesting and Unusual Pulmonary  
Cases

4:30 P.M.  
**BUSINESS MEETING**

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**TENNESSEE PEDIATRIC SOCIETY  
AND  
TENNESSEE ACADEMY OF  
FAMILY PHYSICIANS**  
(*Joint Meeting*)  
THURSDAY, APRIL 12, 1973  
**SCIENTIFIC PROGRAM**

Room 216 Sheraton-Peabody Hotel

1:00 P.M.  
"Headache in Children"

2:00 P.M.  
"Epilepsy"

3:00 P.M.  
Questions and Discussion  
GERALD M. FENICHEL, M.D., Professor and Chair-  
man Neurology, Vanderbilt Medical School  
(Pediatricians are invited to meet with the Ten-  
nessee Society of Pathology on Saturday, April 14,  
1973, from 1:00 to 5:30 P.M., on IMMUNOLOGY.

★ ★ ★

**TENNESSEE DISTRICT BRANCH—  
AMERICAN PSYCHIATRIC  
ASSOCIATION**  
THURSDAY, APRIL 12, 1973  
Galleries (Room 527) Downtowner Motor Inn  
**SCIENTIFIC PROGRAM**

9:00 A.M.  
"Psychological Problems of the Disadvantaged"  
By: JEANNE SPURLOCK, M.D., Professor of Psy-  
chiatry, Meharry Medical College



9:45 A.M.

**"The Psychophysiological Aspect of Cancer"**

By: JAMES MATHIS, M.D., Professor of Psychiatry,  
Medical College of Virginia

10:30 A.M.-11:00 A.M.

*Intermission—Visit Exhibits*

11:00 A.M.

**PANEL DISCUSSION**

**"The Psychiatric Revolution—A Twenty-Year Retrospective"**

(Participants to be Announced)

12:15 P.M.

**LUNCHEON**

Plantation Room      Downtowner Motor Inn

1:30 P.M.

**Business Meeting**

Galleries (Room 527)      Downtowner Motor Inn

3:00-3:30 P.M.

*Intermission—Visit Exhibits*

3:30-5:00 P.M.

**BUSINESS MEETING**

6:30 P.M.

**Cocktail Hour and Banquet**

Grand Salon—East      Downtowner Motor Inn

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**TENNESSEE SOCIETY OF  
PLASTIC AND  
RECONSTRUCTIVE SURGEONS**

THURSDAY, APRIL 12, 1973

12:15 P.M.

**LUNCHEON**

Levee Room      Downtowner Motor Inn

1:15 P.M.

**SCIENTIFIC PROGRAM**

**"Maxillofacial Prosthodontia"**

By: G. A. McCARTY, JR., D.D.S., Houston, Texas

**"Fractures of the Zygomatico Maxillary Complex—  
10 Year Review"**

By: MANOUCHER FAIZ, M.D. and CAULEY HAYES,  
M.D., Chattanooga

**"Blepharoplasty"**

By: MCCARTHY DEMERE, M.D., Memphis

**"Cervicofacial Flap"**

By: ALLEN HUGHES, M.D., Memphis

**"Carpal Tunnel Syndrome From a Rare Cause"**

By: CAULEY HAYES, M.D., Chattanooga

**"Keratosis Palmaris Et Plantaris"**

By: W. H. KISNER, M.D., Memphis

**"Surgical Management of Large Nevi"**

By: WILLIAM MILTON ADAMS, M.D., Memphis

**"Complications of Mammary Replacement Follow-  
ing Simple Mastectomy"**

By: JAMES H. FLEMING, M.D., Nashville

**"Surgical Treatment of Skin Cancer"**

By: JOHN B. LYNCH, M.D., Nashville

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**WOMAN'S AUXILIARY TO THE  
TENNESSEE MEDICAL  
ASSOCIATION**

THURSDAY, APRIL 12, 1973

Albert Pick Motor Inn

**PROGRAM**

10:00 A.M.-12:00 Noon

Meeting of Finance and Revisions Committees,  
President's Suite, Rooms 1120-1121

1:00-2:00 P.M.

Pre-convention Board Meeting  
Shelby Room

2:00-3:00 P.M.

Meeting of Awards Committee  
President's Suite, Rooms 1120-1121

2:00-5:00 P.M.

Registration, Lobby  
Hospitality Room, 11th Floor  
Entries Accepted for Arts and Crafts  
AMA-ERF Gift Shop, Scrapbooks,  
Doctors' Day Scrapbooks

**PROGRAM**

**Friday, April 13, 1973**

**IMPACT BREAKFAST**

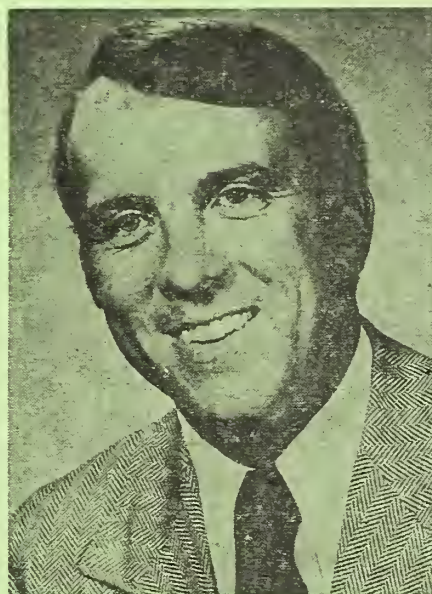
Venetian Room

Sheraton-Peabody Hotel

8:00 A.M.

**Program**

——IMPACT Guest Speaker——



CONGRESSMAN ROBIN BEARD



Tennessee's newest Congressman, Robin L. Beard will be the guest speaker at this year's IMPACT (Independent Medicine's Political Action Committee-Tennessee) Breakfast. One of the highlights of the TMA meeting annually, the Breakfast will be held in the Sheraton-Peabody Hotel's Venetian Room at 8:00 a.m. on Friday, April 13, 1973. Tickets will be on sale at the Main Registration Desk.

A Republican, Congressman Beard was born in Knoxville but grew up in the Nashville area. He is a graduate of Vanderbilt University and served with distinction as an Officer in the Marine Corps.

A campaign coordinator for Winfield Dunn in his successful bid for Governor in 1970, Mr. Beard was named Commissioner of Personnel by Governor Dunn, a post he held for two years.

Representative Beard defeated 4-term Democratic Congressman William Anderson last November by a 17,000 vote margin, making him the youngest member of the Tennessee Congressional Delegation and the youngest Congressman ever elected from his district. He serves on the powerful House Armed Services Committee.

IMPACT is fortunate to have obtained Congressman Beard as the 1973 Breakfast Speaker. Be sure to get your tickets early as space will be limited.

### **TMA General Program**

**Continental Ballroom      Sheraton-Peabody Hotel**

**Presiding: HARRY A. STONE, M.D., Chattanooga,  
Chairman, Program Committee,  
Tennessee Medical Association.**

**9:45 A.M.**

#### **"Emergency Physicians"**

**By: RALSTON R. HANNAS, JR., M.D.  
Director of Services  
Evanston Hospital  
Evanston, Illinois**

#### **"A Layman's Viewpoint of Health Care Delivery"**

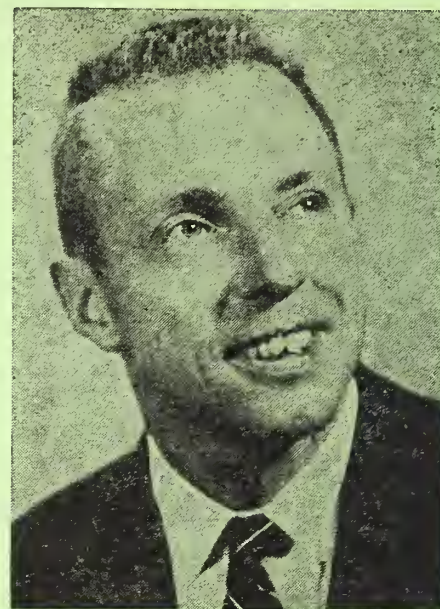
**By: HARRY SCHWARTZ, Ph.D.  
Editorial Board  
The New York Times  
New York City, New York**

#### **"A Legislator's Viewpoint of Health Care Delivery"**

**By: THE HONORABLE WILBUR D. MILLS  
Chairman, Ways and Means Committee  
U. S. House of Representatives  
Washington, D. C.**

**Visit Exhibits**

### **TMA Guest Speaker**



**RALSTON R. HANNAS, JR., M.D.  
Director of Emergency Services  
Evanston Hospital, Illinois**

#### **SUBJECT: "Emergency Physicians"**

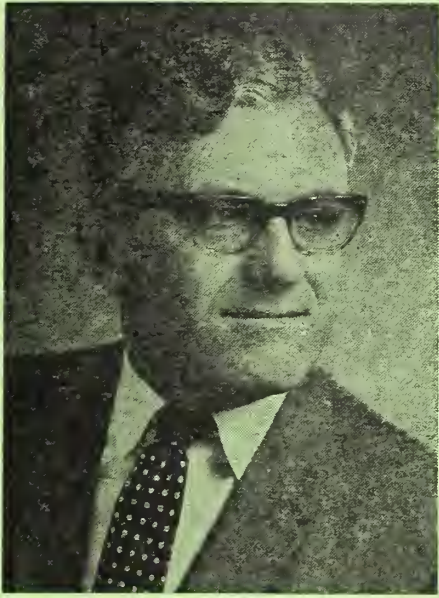
An authority on emergency medicine, Dr. Hannas is the Director of Emergency Services at Evanston Hospital in Evanston, Illinois. He serves the American College of Emergency Physicians as Vice Chairman of the Board of Directors, Chairman of the Commission on Education, and Chairman of the Scientific Assembly. Further, he is on the Committee on Emergency Health Services, Council on Professional Services, and Special Committee on the Provision of Health Services (Perloff Committee) of the American Hospital Association.

In April 1968, Dr. Hannas formed an Emergency Physicians Group in Kansas City which eventually provided full-time emergency physician coverage at 3 hospitals in the area.

Dr. Hannas began a distinguished career in medicine in Sentinel, Oklahoma where he was a partner in private practice in a small hospital and clinic for more than 12 years. During this period, he was an active member of the Oklahoma State Medical Association and Assistant Clinical Professor of Medicine at the University of Oklahoma Medical School.

A native of New Jersey, Hannas received an undergraduate degree at Purdue University and the M.D. degree at Harvard Medical School.





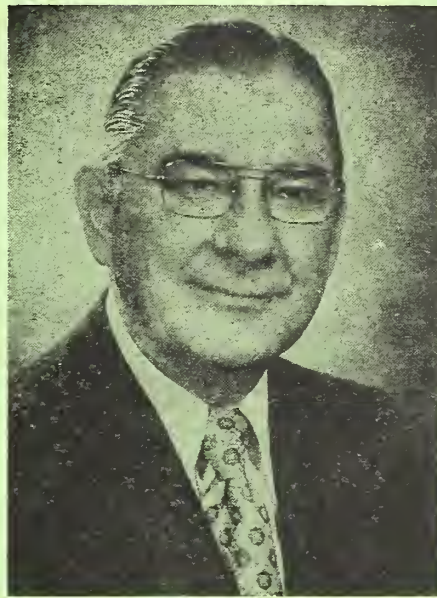
HARRY SCHWARTZ, PH.D.  
Editorial Board  
The New York Times

**SUBJECT: "A Layman's Viewpoint of Health Care Delivery"**

The author of the recently published book, *The Case for American Medicine*, Dr. Schwartz has become a leading lay spokesman on health care problems in the United States. He has written numerous articles on scientific and medical matters for The New York Times and other noted publications.

"If the revolutionary proposals for transforming medicine are adopted, medical care in this country will cost more while providing less satisfaction and poorer treatment for millions," he stated in the August 14, 1971 edition of *The Saturday Review*.

Dr. Schwartz is also a well-known economist and specialist on Soviet Affairs. He has served as an economist with the War Production Board, the Department of Agriculture and Department of State, and was a specialist on Soviet economic intelligence with the Office of Strategic Service during World War II. An alumnus of Columbia University where he received the B.A., M.A., and Ph.D. degrees, Dr. Schwartz has held professorships at Syracuse University, Columbia University, New York University, American University and Brooklyn College. Currently, he is University Professor at State University College in New York.



THE HONORABLE WILBUR D. MILLS  
U. S. House of Representatives  
(Democrat-Arkansas)

**SUBJECT: "A Legislator's Viewpoint of Health Care Delivery"**

As chairman of the pivotal House Ways and Means Committee, Congressman Mills is a key figure in the development of national health insurance legislation.

"The impetus for real and lasting change in our health system to meet its problems must come largely from those working within the system. The problems of rising costs, of disorganized and ineffective methods of providing health care, of increasing dependence on foreign medical graduates so desperately needed in their own countries, and other problems . . . cannot be solved by government alone. Legislation can effectively support forces for change; it cannot create them," Mills said, before the American Society of Internal Medicine.

Mr. Mills has been a member of Congress for 33 years. He was named to the Ways and Means Committee in October, 1942; and in 1958 was elected chairman, the youngest in the history of the Committee. He serves as chairman of the House Committee on Committees and vice chairman of the Joint Committee on Internal Revenue Taxation. A native of Kensett, Arkansas, Chairman Mills is a graduate of Hendrix College and Harvard Law School.



# The President's Reception and BANQUET

FRIDAY, APRIL 13, 1973  
Sheraton-Peabody Hotel  
Continental Ballroom  
Memphis, Tennessee

## PROGRAM

William T. Satterfield, Sr., M.D., President  
Tennessee Medical Association

RECEPTION—6:00 P.M.

BANQUET—7:00 P.M.

### DANCING

To the Music of Tony Barrasso  
and His Orchestra

★ ★ ★

### Events Include

- ★ Introduction of Distinguished Guests Attending the Annual Meeting
- ★ Presenting the Outstanding Physician of the Year in Tennessee
- ★ Special Awards to the Winning Representatives of The Health Project Contest
- ★ Presenting the Distinguished Service Award
- ★ Installation of the Incoming President
- ★ Fun—Entertainment—Dancing

★ ★ ★

Obtain Tickets at Registration  
Desk in the Sheraton-Peabody  
Friday Evening  
April 13, 1973

## SPECIAL ENTERTAINMENT— TMA BANQUET

Friday Evening, April 13 in the  
Sheraton-Peabody Hotel



"THE STONEMANS"

The singing . . . swinging . . . stomping . . . sensational . . . Stonemans, "vocal group of the year" Colorful and accomplished . . . and their auto-harps, mandolins and toe-tapping tamborines bring any gathering to its feet with applause for MORE! The Stonemans have been on special personal appearances on such TV shows as the Danny Thomas Special—Steve Allen Show—Tonight Show—NBC Documentary "Music From the Land"—Hollywood Palace—Glen Campbell Show—Grand Ole Opry—and many others. You can't afford to miss this special entertainment, one of the best musical groups ever to appear at our banquet.

★ ★ ★

## SPECIALTY SOCIETIES

TENNESSEE STATE  
ORTHOPAEDIC SOCIETY

FRIDAY, APRIL 13, 1973

Room 200

Sheraton-Peabody Hotel

## SCIENTIFIC PROGRAM

1:00 P.M.

"Avascular Necrosis of the Femoral Head in Mature and Immature Dogs"

By: DONALD C. HENARD, M.D., Memphis

1:20 P.M.

Discussion

1:30 P.M.

### GUEST SPEAKER

"Difficulties and Complications with Total Hip Arthroplasty"

By: R. S. BRYAN, M.D., Rochester, Minnesota

2:00 P.M.

"Current Orthopaedic Situation in Vietnamese Civilian Hospitals"

By: PAUL SPRAY, M.D., Oak Ridge

2:20 P.M.

Discussion

2:30 P.M.

"High Pressure Injection Injuries of the Hand"

By: LEE W. MILFORD, M.D., Memphis

2:50 P.M.

Discussion

3:00 P.M.

"Congenital Vertical Talus in Adults"

By: JOHN CONNOLLY, M.D., Nashville

3:20 P.M.

Discussion

3:30 P.M.

"Unilateral Posterior-Lateral Spinal Fusion"

By: D. J. SCOTT, JR., M.D., Memphis



3:50 P.M.

Discussion

4:00 P.M.

**Annual Business Meeting**

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**TENNESSEE TRAUMA COMMITTEE  
AND  
EMERGENCY MEDICAL SERVICES  
COMMITTEE**

FRIDAY, APRIL 13, 1973

12:00 NOON

**LUNCHEON AND SCIENTIFIC  
MEETING**

Room 213—Sheraton-Peabody Hotel

★ ★ ★

**TENNESSEE ASSOCIATION  
OF PUBLIC HEALTH PHYSICIANS**

FRIDAY, APRIL 13, 1973

Levee Room

Downtowner Motor Inn

1:15 P.M.

**ORGANIZATIONAL AND  
BUSINESS MEETING**

★ ★ ★

**TENNESSEE ACADEMY OF  
OTOLARYNOLOGY**

FRIDAY, APRIL 13, 1973

1:15 P.M.

Room 370

Sheraton-Peabody Hotel

**ORGANIZATIONAL MEETING**

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**TENNESSEE OBSTETRICAL AND  
GYNECOLOGICAL SOCIETY**

FRIDAY, APRIL 13, 1973

Room 214

Sheraton-Peabody Hotel

12:00 NOON

**COCKTAILS**

(Courtesy of Reid-Provident Laboratories)

12:30 P.M.

**LUNCHEON**

(Tennessee State Obstetrical and  
Gynecological Society Only)

1:30 P.M.

*Intermission—Visit Exhibits*

**SCIENTIFIC PROGRAM**

STEWART A. FISH, M.D., President, Presiding

2:00 P.M.

**BUSINESS MEETING**

2:15 P.M.

**SCIENTIFIC PRESENTATION**

**"Management of the Pregnant Diabetic"**

By: JOHN MORRISON, M.D., Assistant Professor  
of the Department of Obstetrics and Gynecology at the University of Tennessee College  
of Medicine

2:45 P.M.

**"The Post Mature Infant Syndrome"**

By: GEORGE ELLIS, M.D., Resident of Obstetrics  
and Gynecology at the City of Memphis Hospitals

3:15 P.M.

**"Hemoclip Tubal Sterilization"**

By: SIDNEY W. ARNOLD, M.D., Assistant Professor  
of the Department of Obstetrics and Gynecology at the University of Tennessee College  
of Medicine

3:45 P.M.

**COFFEE BREAK**

*and Visit Exhibits*

4:00 P.M.

**PANEL DISCUSSION**

**"Abruptio Placenta"**

Panelists:

JOHN MORRISON, M.D., Assistant Professor of  
the Department of Obstetrics and Gynecology at  
the University of Tennessee College of Medicine;  
W. L. WISER, M.D., Associate Professor of the  
Department of Obstetrics and Gynecology at the  
University of Tennessee

STEWART A. FISH, M.D., Professor and Chair-  
man of the Department of Obstetrics and Gynecology at the University of Tennessee College of  
Medicine

4:30 P.M.

**ADJOURNMENT**

★ ★ ★

**TENNESSEE ACADEMY OF  
OPHTHALMOLOGY**

FRIDAY, APRIL 13, 1973

11:00 A.M.

**BUSINESS MEETING**

Grand Salon—West

Downtowner Motor Inn

12:30 P.M.

**LUNCHEON AND PANEL  
DISCUSSION**

Grand Salon—East

Downtowner Motor Inn

Panelists: FRED C. BLODI, M.D.

Iowa City, Iowa

J. BROOKS CRAWFORD, M.D.

San Francisco, California

DENIS O'DAY, M.D.

Nashville

**SCIENTIFIC PROGRAM**

Grand Salon—West

Downtowner Motor Inn



1:40 P.M.

Meeting Called to Order  
By: ALLEN G. LAWRENCE, JR., M.D.,  
*Vice President*

1:45 P.M.

"Orbital Tumor and Amblyopia—A Case Report"  
By: HARRY M. LAWRENCE, M.D., Chattanooga

1:55 P.M.

"Oculopharyngeal Muscular Dystrophy"  
By: FRED SLAUGHTER, M.D., Bristol

2:10 P.M.

### **GUEST SPEAKER**

"Tumor, Trauma Relationships"  
By: J. BROOKS CRAWFORD, M.D., San Francisco,  
California

3:10 P.M.

*Intermission—Visit Exhibits*

3:20 P.M.

"Band Keratopathy"  
By: GEORGE WALKER, M.D., and THOMAS O.  
WOOD, M.D., Memphis

3:30 P.M.

### **GUEST SPEAKER**

"Unusual Corneal Degeneration"  
By: FRED C. BLODI, M.D., Iowa City, Iowa

4:30 P.M.

"Gas Gangrene Endophthalmitis"  
By: LARRY SAULS, M.D., DENIS O'DAY, M.D., and  
WILKES, M.D., Nashville

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## **TENNESSEE DIABETES ASSOCIATION**

FRIDAY, APRIL 13, 1973

12:15 P.M.

### **LUNCHEON**

Louis XVI Room Sheraton-Peabody Hotel

### **SCIENTIFIC PROGRAM**

Louis XVI Room Sheraton-Peabody Hotel

1:00 P.M.

"The Glucose Electrode and the Artificial Beta Cell  
—A Progress Report"  
By: J. STUART SOELDNER, M.D., Associate Pro-  
fessor of Medicine, Harvard University Medi-  
cal School; Senior Associate in Medicine, Peter  
Bent Brigham Hospital; Associate Director,  
Elliot P. Joslin Research Laboratory, Boston,  
Massachusetts

2:00 P.M.

"Relationship of Capillary Basement Membrane  
Thickening to Aging and to Diabetic Microanio-  
pathy"  
By: JOSEPH R. WILLIAMSON, M.D., Associate Pro-  
fessor of Pathology, Washington University  
Medical School, St. Louis, Missouri

2:40 P.M.

"Autonomic Neuropathy in Diabetes"  
By: MAX ELLENBERG, M.D., Clinical Professor of  
Medicine, Mount Sinai School of Medicine;  
Attending Physician for Diabetes, the Mount  
Sinai Hospital, New York

3:20 P.M.

"Relationship of Carbohydrate Intolerance to  
Fluctuating Hearing Loss"  
By: ABBAS E. KITABCHI, M.D., PH.D., Associate  
Chief of Staff for Research, Veterans Admin-  
istration Hospital, Memphis; Professor of  
Biochemistry and Associate Professor of  
Medicine, University of Tennessee Medical  
Units, Memphis, Tennessee, and JOHN J.  
SHEA, M.D.

4:00 P.M.

Business Meeting With Lay Group

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## **TENNESSEE NEUROSURGICAL SOCIETY**

FRIDAY, APRIL 13, 1973

Room 202

Sheraton-Peabody Hotel

### **SCIENTIFIC PROGRAM**

1:15 P.M.

(Moderator: BLAND W. CANNON, M.D., *President*,  
Memphis)

"SYMPOSIUM ON NEW APPROACHES TO  
THE TREATMENT AND RELIEF OF PAIN"

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## **WOMAN'S AUXILIARY TO THE TENNESSEE MEDICAL ASSOCIATION**

FRIDAY, APRIL 13, 1973

Albert Pick Motel Inn

### **PROGRAM**

9:00 A.M.-4:30 P.M.

Registration, Lobby  
Hospitality Room, 11th Floor  
Arts and Crafts  
AMA-ERF Gift Shop

8:00 A.M.

### **IMPACT BREAKFAST**

9:30 A.M.-12:00 Noon

Members of the Woman's Auxiliary are invited  
to attend the TMA General Sessions in the Con-  
tinental Ballroom of the Sheraton-Peabody Hotel.



12:30 P.M.

## LUNCHEON

Chickasaw Country Club

Transportation will be provided at the  
Sheraton-Peabody Hotel.

## GUEST SPEAKER

MRS. WILLARD C. SCRIVNER, President-Elect  
Woman's Auxiliary to the AMA

2:00-4:00 P.M.

General Session

Chickasaw Country Club

# PROGRAM

## Saturday, April 14, 1973

### MEDICINE AND RELIGION BREAKFAST

Venetian Room Sheraton-Peabody Hotel

7:00 A.M.

Presiding: IRA L. ARNOLD, M.D., *Chairman*, Committee on Medicine and Religion

## SPEAKER



J. FRANK WALKER, M.D.  
Speaker, AMA House of Delegates  
Atlanta, Georgia

This noted leader of organized medicine is an equally noted churchman. For many years he has been a dedicated member and Elder of the First Presbyterian Church in Atlanta.

An Atlanta radiologist since 1953, Dr. Walker was elected Speaker of the AMA House of Delegates last June. He has served the AMA as a delegate from his state, and as a member of the AMA Council on Legislation and Committee on Health Manpower.

He is an active member and past president of several medical organizations including the Medical Association of Atlanta, Fifth District Medical

Society of Georgia, Atlanta Radiological Society, Georgia Radiological Society, and American College of Radiology. With the Medical Association of Georgia, he has served as Speaker of the House, Councilor, Executive Committee member, and chairman of numerous committees.

A graduate of Oxford College of Emory University and the Emory University College of Medicine, Dr. Walker is currently an Associate Professor of Radiology at his alma mater and a member of the Emory Board of Visitors. He is a past president of the Emory National Alumni Association and a recipient of the medical alumni Award of Honor.

Wives Invited

★ ★ ★

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9:00 A.M.

### HOUSE OF DELEGATES

#### Second Session

Forest Room Sheraton-Peabody Hotel

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## SPECIALTY SOCIETIES

★ ★ ★

### TENNESSEE STATE SOCIETY OF ANESTHESIOLOGISTS

SATURDAY, APRIL 14, 1973

Room 213 Sheraton-Peabody Hotel

### SCIENTIFIC PROGRAM

9:00 A.M.

"Practical Acid-Base Balance in the Operating Room and After"

By: JOACHIM GRAVENSTEIN, M.D., Professor and Chairman, Department of Anesthesia, Case Western Reserve University, Cleveland, Ohio

10:00 A.M.

### INTERMISSION—EXHIBITS

10:30 A.M.

"Regional Anesthesia Made Simple"

By: ALON P. WINNIE, M.D., Professor and Chairman, Department of Anesthesia, Abraham Lincoln School of Medicine, University of Illinois, Chicago, Illinois

12:15 P.M.

## LUNCHEON

Room 214 Sheraton-Peabody Hotel

### SCIENTIFIC PROGRAM

(Continued)

Room 213 Sheraton-Peabody Hotel



1:15 P.M.  
"How Can We Solve the Manpower Shortage?"  
By: JOACHIM GRAVENSTEIN, M.D.

2:15 P.M.  
Contributed Scientific Papers

4:00 P.M.  
**BUSINESS MEETING**

7:00 P.M.  
"MOONLIGHT ON THE  
MISSISSIPPI"  
Memphis Queen  
Cruise and Dinner

★ ★ ★

**TENNESSEE SOCIETY OF  
PATHOLOGISTS**  
SATURDAY, APRIL 14, 1973

11:00 A.M.  
**BUSINESS MEETING**  
Room 202 Sheraton-Peabody Hotel

12:00 NOON  
**LUNCHEON**  
Room 215 Sheraton-Peabody Hotel

**SCIENTIFIC PROGRAM**  
Room 202 Sheraton-Peabody Hotel  
Immunology in Modern Clinical Practice

1:00-1:45 P.M.  
"Modern Treatment of Leukemia, Results and  
Problems"  
By: ALEXANDER A. GREEN, M.D., St. Jude Chil-  
dren's Research Hospital, Memphis

2:00-3:45 P.M.  
"Clinical Approach to Immune Mediated Disease  
—Part I and Part II"  
By: PHIL LIEBERMAN, M.D., and LLOYD CRAW-  
FORD, M.D., Memphis

4:00-5:00 P.M.  
"Techniques in a Modern Immunology Laboratory"  
By: BRUCE S. RABIN, M.D., Assistant Professor of  
Pathology, School of Medicine, University of  
Pittsburgh, Pittsburgh, Pennsylvania

5:00-5:30 P.M.  
**PANEL DISCUSSION**  
Panelists: ALEXANDER A. GREEN, M.D.  
PHIL LIEBERMAN, M.D.  
LLOYD CRAWFORD, M.D.  
BRUCE S. RABIN, M.D.

★ ★ ★  
**TENNESSEE RADIOLOGICAL  
SOCIETY**  
SATURDAY, APRIL 14, 1973  
Room 216 Sheraton-Peabody Hotel

12:15 P.M.  
**LUNCHEON**

1:15 P.M.  
**SCIENTIFIC PROGRAM**  
"Radiology of the Spinal Cord Injury Patient"  
By: BEN GREENBERG, M.D., Veterans Hospital,  
Memphis  
"The Role of Surgery and Radiology in the  
Management of Thoracolumbar Injuries"  
By: JOSEPH LOUGHEED, M.D., Memphis

Intermission—Visit Exhibits

**Business Meeting**

★ ★ ★

**WOMAN'S AUXILIARY TO THE  
TENNESSEE MEDICAL  
ASSOCIATION**  
SATURDAY, APRIL 14, 1973  
Albert Pick Motel

**PROGRAM**

9:00 A.M.-12:00 Noon  
Registration, Lobby  
Hospitality Room, 11th Floor  
Arts and Crafts  
AMA-ERF Gift Shop

7:30-9:30 A.M.  
Interfaith Prayer Breakfast and  
Combined Boards  
1972-73, 1973-74 Meeting  
Presiding: MRS. JERE LOWE

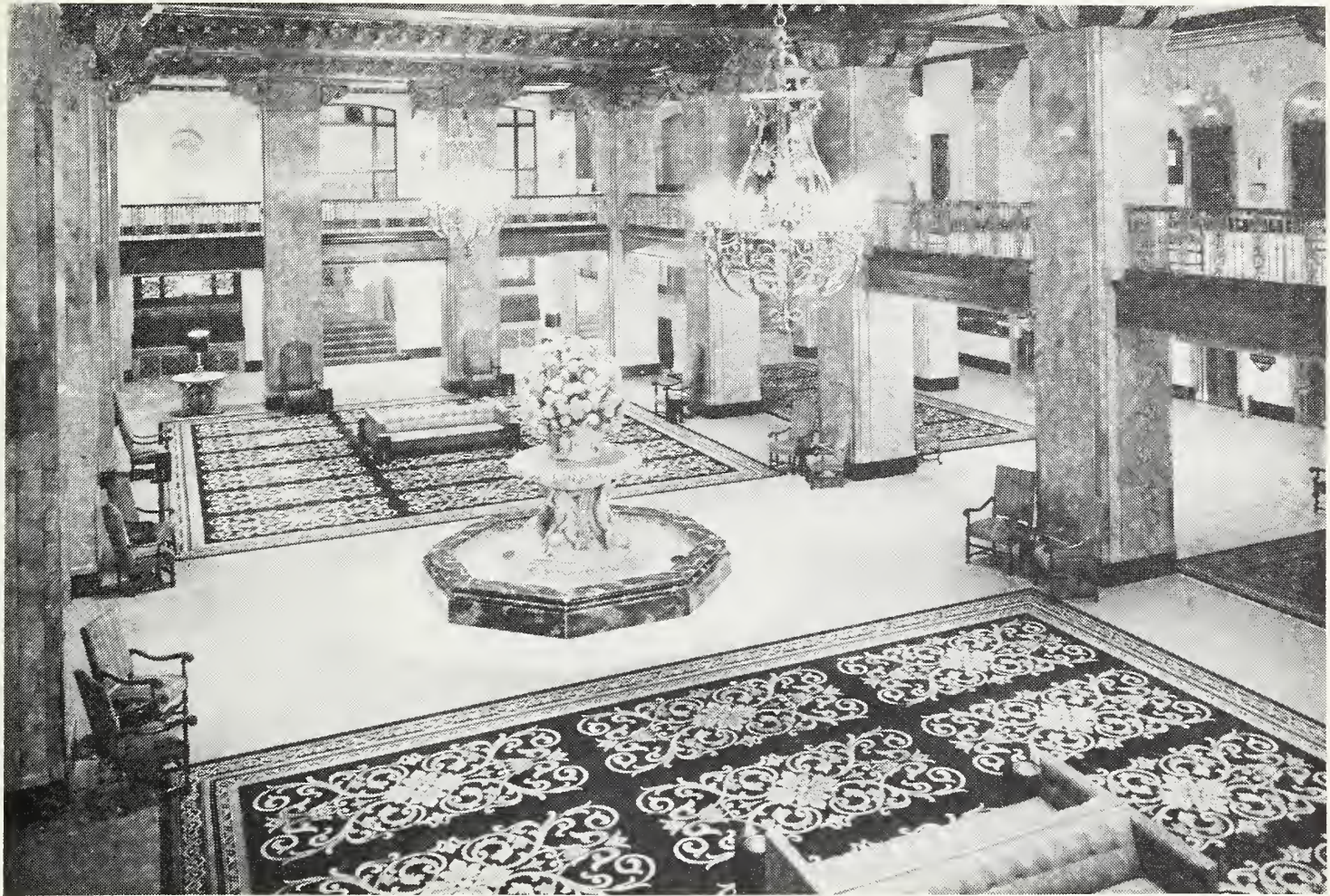
9:45 A.M.-12:00 Noon  
General Convention Session  
Lower Level

12:15-2:00 P.M.  
**LUNCHEON**  
Lower Level  
Honoring Past Presidents

2:00-3:00 P.M.  
Pick Up Arts and Crafts, Scrapbooks, Etc.



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### Health Goals and Policies\*

We adopt the word Health Organization definition of health which describes it as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity." It expresses our scope of interest and direction of effort. This definition, along with a firm belief that good health should be a right for all Tennesseans, represents the philosophy underlying all of our work. As a specific expression of these principles, we should insure that every child is given the right to be born healthy, that the provision of quality health care not be dependent upon a person's ability to pay, and that all people are provided continuous health education.

We believe federal, state, and local health agencies (private, public, and voluntary) should initiate a continuing public education program to promote good health and provide information in the availability and utilization of health services.

Medical care should be comprehensive and should place most importance on prevention; therefore, primary consideration in the planning and allocation of health resources should be given to prevention of disease, disability, and premature death. Where health services are needed, but are unavailable, inaccessible, inadequate, or insufficient, it should be the responsibility of local, state or federal government to provide such services.

We recognize the importance, the challenge, and the opportunity to express concern for all people through comprehensive health planning. We feel, however, that most people are not fully aware of the existence of comprehensive health planning nor do they understand the benefits they can derive from its implementation. Therefore, we, the Tennessee Health Planning Council, should provide information and publicity about the health care system. We should also encourage support of needed legislation identified as contributing to the realization of desirable long-range health goals. Also, in this connection, we should set forth

\*Report of Task Force on Health Goals. Tennessee Health Planning Council.

target dates for significantly reducing incidence rates for preventable conditions; e.g., tuberculosis, venereal disease, deaths from cancer of the cervix.

While the implementation of this counsel will require actions of a regulatory nature, we are of the opinion that we have a vital function to perform and can best serve the interest of the public by striving to remain a nonregulatory and independent body.

The study and appropriate implementation of these recommendations and the day-to-day direction of the health planning process and activities are the responsibility of the director and staff of the Tennessee Office of Comprehensive Health Planning.

The staff shall give top priority to planning and to activities relating to planning. Program activities, such as Phase II Cost Control, National Health Service Corps, Medical Experience Directed Into Health Careers, shall be given secondary priority and accepted only as additional resources permit.

Ideally, the staff shall base its planning activities on gathering and analysis of facts, technology available to target on the problem/issue, and consideration of the quality of planning being performed by other agencies. Timing and cost shall be less important factors that determine the need for planning. Least important factors are: pressure from vested interest power sources, availability of funds, what people "think" is needed, and what the staff "wants."

Furthermore, the staff shall strive for excellence in planning. All plans must be supported with background information and accurately documented. In implementing plans, the staff shall include educational efforts and public information methods to influence improved changes in health as well as changes in personal behavior and attitudes.

In addition, the staff and council shall encourage the consumer's active participation in health planning. Comprehensive health planning is an advocate of all consumers and providers interested in planning for improvement in the health care delivery system.

We believe continuity of health care should be assured for patients entering any point in the health care system and that primary, ambulatory care should be the preferred method of health care delivery. Secondary, institutional care should only be utilized for health services



that cannot be delivered on an ambulatory basis. In this connection, in-patient bed facilities and services should be constructed or expanded only if community need clearly requires it.

The health care delivery system should consist of a variety of methods of delivery, including, but not limited to, prepaid group practice, family health centers, neighborhood health centers, hospital-based satellites, medical school centers, physician groups, fee-for-service solo practitioners. However, in the planning process, the Tennessee Office for Comprehensive Health Planning shall evaluate experimental as well as the existing methods of health delivery.

We are convinced that a complete system of emergency medical services is necessary and should be made available to all people.

The staff should assure that family planning, mental health, and rehabilitative services are considered and receive special attention in their planning efforts. We believe that family planning should be made available to all citizens, that mental health services be available and accessible at the community level, and that rehabilitative services be available to all physically and mentally handicapped.

The demand for health services has outstripped the capability of health manpower to deliver these services. We, therefore, recommend that wherever possible, functions physicians and dentists now traditionally perform be delegated to allied health personnel. In addition, incentives should be provided to encourage health professionals, trained in Tennessee, to remain to practice their profession in Tennessee.

With respect to professional health personnel, we recommend that provider groups use appropriate methods of peer review to prevent development of conflict of interest situations in which the patient is exploited, and assure high quality health care at reasonable, affordable costs.

Finally, we believe that environmental quality is a fundamental aspect of health and should be a major consideration of this Council and the Tennessee Department of Public Health. On a statewide basis, the general distribution and density of population and the uses to which we put our land are key factors. In comparison with some of the more heavily populated parts of our country, Tennessee is, at present, an underpopulated state. Considering the wealth of natural beauty of Tennessee and its great

potential for industrial development, we should anticipate an accelerated growth rate as population pressures continue to mount in the great urban centers to the north and northeast of us. This suggests that portions of Tennessee now considered rural and which may have no widespread environmental problems today, may become increasingly more at risk. In this connection, and in preparation for rational land-use planning, we encourage the design and funding of systems studies to determine the optimum population growth patterns for Tennessee.

On a local basis, we recognize that social conditions have a direct effect on health. Consequently, we recommend that attention be directed to the social needs of all our population for a clean, safe, and enjoyable environment, adequate housing, nutritional education, transportation, recreational facilities, and mutual respect. Many of these general goals can best be attained by identifying specific actions to be taken, and by setting desired time limits. In this regard, we recommend that all public water systems be fluoridated and that a date should be established when this is to be accomplished.

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WM. T. SATTERFIELD

**president's  
page**

## *National Health Plans — 1973*

A new Congress, with some new faces and some old issues, had hardly convened before about 2,350 proposals were introduced, of which 375 were of interest to medicine. Among these were H.R. 1, introduced by Rep. Ullman (D-Ore.), a National Health Insurance Program based upon the American Hospital Association's "Ameriplan" proposal. It is a new system of health care delivery designed to provide both basic and catastrophic coverage to all persons at a cost related to income, primarily through groups centered around hospital staffs.

Sen. Kennedy and Rep. Griffiths reintroduced S. 3 and H.R. 22 as their National Health Plan, modified from last year. HMO's are featured and funds for training health-care personnel are provided, as well as provisions for the settlement of malpractice claims. The cost—??? (over 80 billions extra per year!) and direct government control.

On January 18, Mediredit, the AMA developed national health proposal, was introduced (S. 444 and H.R. 2222). It is officially titled the "Health Care Insurance Act of 1973." This bill has broader benefits than the similar bill of 1972. Senators Hansen (R-Wyo.) and Harke (D-Ind.) and Representatives Fulton (D-Tenn.) and Broyhill (R-Va.) are sponsors. Rep. Fulton predicts 200 sponsors in the 93rd Congress.

Hearings will be held on these bills (and others) this year, although predictions for passage for a National Health Plan bill are for 1974.

Contrary to a prevailing attitude, that "AMA never does anything," this bill is one practicing physicians could live with and be stimulated to continue exerting their efforts to elevate the quality of medical care.

Mediredit is based on the principle of tax credits to help finance the purchase of high quality health insurance for everyone. The lower a family's income, the greater the government's financial assistance. For those Americans who pay little or no income tax, the government will pay all of their health insurance premium. As income tax liability goes up, the extent of the government's assistance decreases. To encourage all Americans to buy health insurance, *some* government assistance would be given *all* taxpayers. This is the fair way of distributing the high costs of medical care—on the basis of each American's ability to pay. Catastrophic coverage is included. The Mediredit Plan assures care for all and preserves the private enterprise method in the delivery of Health Care.

It behooves every practicing physician to study Mediredit. If you like what you see, tell your national representatives. Perhaps they, too, would agree that this is the method of preventing a disruption of the health care delivery system that might give American patients inferior care.

The AMA never does anything???

Sincerely,

*William T. Satterfield*

President



# journal

OF THE  
TENNESSEE MEDICAL ASSOCIATION

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL  
PROFESSION OF TENNESSEE

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MARCH, 1973

# editorial

## Comprehensive Health Planning

Printed as a special item in this issue (page 264) is the *Report of the Task Force on Health Goals of the Tennessee Health Planning Council*. This report has been adopted as official policy by the Council as a guide for the health planning efforts of the Office of Comprehensive Health Planning of The Tennessee Department of Public Health. I hope you will take the time to read it, because it vitally affects you. You should know that the task force was made up of 15 people, 3 of whom are practicing physicians and members of the TMA Committee on Comprehensive Health Planning.

I read the report with a mixture of interest, delight, and dismay. It tends to pontificate, but sets forth some noble goals. What bothered me most was what appeared to be some fuzzy thinking and imprecise terminology, which lead to some unfortunate implications.

The report starts off by claiming good *health* (not *health care*) as a right for all Tennesseans, and that it is the right of every child to be born healthy. Unless we are going to do a lot of genetic dickering, it is no more possible for every child to be born healthy than to be born good looking, and we all know about that (also, mothers often do things which they know to be harmful to the fetus, such as using drugs.) As for health as a right, I refer you to a previous editorial (Vol. 65, p. 731, Aug. 1972), and will only say here that when people continue to gorge themselves, smoke, and drink and drive (among other things) in the face of all the evidence (and it isn't for lack of education)—how can good health be considered a right? If the report means that everyone has a right to good health care, we'll talk about that later. If it means what it says, forget it! A goal, yes. But not a right.

Which brings me to my second point: health care does not equal medical care, and I am not always sure which is meant in the report. The report says "Medical care should be comprehensive, and . . . primary consideration . . . should be given to prevention of disease, disability, and premature death." And I say, "Right on." But the biggest part of prevention is not medical at all, but social, and has somewhat to do with public education (which is laudably emphasized in the report), but even more to do with individual responsibility. It has to do with spiritual resources, with self discipline, and with character. To carry out this most important aspect of prevention is going to *cost* somebody—everybody—and not just money.

The biggest cause of preventable death and destruction is the gasoline engine sailing down the concrete strip, particularly if the gasoline is mixed with alcohol. Some of the vehicles are unsafe at any speed. I refer you to another editorial about this last month. But will you hold still for a law requiring that your automobile be inspected semiannually, that you have a physical examination biannually, for teeth in the law, with roadblocks to enforce it? And will you go to jail for driving if you drink? (You will in some parts of Europe—they are taking this seriously.) We can virtually eliminate highways deaths, if we are willing to pay the price. To place the responsibility on the automobile manufacturers begs the issue.

And will you stop smoking so you won't get emphysema, ulcers, cardiovascular problems,



oh, yes, lung cancer? How about not eating so much, so you won't get an early coronary occlusion or diabetes. (All this applies to doctors, too, who of all people should know better.)

Let's get straight what we're talking about when we talk of preventing disability and premature death. Mostly, people talk about what someone else (usually doctors) can do for them (tuberculosis, V.D., or cervical cancer—and this is not unimportant.) But they can do a lot more for themselves—and will not. Again, it's not because of ignorance.

Now let's talk about the right to quality health (medical?) care at reasonable, affordable cost. No one wants this for his patients more than the physician. But the report contains two mutually exclusive statements. One is that everyone deserves high quality care, and the other is that wherever possible functions traditionally performed by physicians and dentists be delegated to allied health personnel. Really, they can't have it both ways. What we're really talking about is a compromise. The "feldsher" system has been tried many times before, and is in use extensively in Russia and China. It is an attempt to make some sort of medical care available in underserved areas. No one in those countries claims it is as good as having a doctor there. It is, however, a satisfactory compromise. We physicians, as well as the planners, are going to have to face this fact.

Medicine has become very sophisticated and complex. The high cost of medical care is due least of all to physicians' fees. There are procedures available which *nobody* can afford. What is a reasonable cost? And where does one stop? A few years ago renal dialysis was available to only a few. Now it is available to pretty much anyone who needs it. But before small portable units were available and relatively inexpensively produced, there was no way—I repeat, *no way*—regardless of expense (which was extreme), to make it available to everyone. It is part of the nature of medical progress that this will always be so. The logistical and economic problems are insurmountable. Therefore, a reasonable cost is not necessarily affordable.

I particularly cheered the last two paragraphs. If there is one thing I dislike above anything else that is happening to my environment, it is sitting in a meeting, or enjoying a meal in a restaurant, only to have cigarette smoke (or worse still, cigar or pipe smoke) wafted into my nostrils. Not only is it unpleasant, but

the surgeon general says it is dangerous to my health (not my smoke—yours). While everyone is talking about industrial pollution, etc. (which is fair game) will *we*, as individuals, stop our own polluting habits? (I don't smoke, but my car does.) Next month the whole issue will be devoted to this subject.

As you read the report, you will find things you do and do not like about it. I have listed a few of mine—there are others, on both sides. Some that I passed over here are more than a little frightening because of bureaucratic overtones. But the Task Force, and the Council, have recommended that the policy statement be subject to continuing study and annual revision. Make your thoughts known to your TMA committee, through which you have input into the Council.

A final word: The report talks about the patient's rights. We physicians talk about our rights. Everyone is talking today about his rights. I have tried to indicate that a workable society depends on individual responsibility, and that we all have to give up some rights in order to ensure others. Often *society* must decide which right takes pre-eminence. We may not like the decision. Society is more and more decreeing that it is my right not to have smoke blown in my face. But it is also saying I must stop my car from smoking, and I may have to find some other way to get rid of my leaves. God help us if we ever reach the point where everyone stands on his own individual rights every time!

J.B.T.



*To the Editor:* The anachronistic editorial "Darwin Revisited" which appeared in the December 1972 issue of the JTMA is earnestly in need of rebuttal. The author writes as though he were living in the 18th century. The theory of evolution is as well proven and documented as is the germ theory of disease. Tremendous amounts of fossils, artefacts, skeletal remains, weapons and tools dating back several million years have been found. These items have very well filled in the "missing links" first referred to



over a century ago. All of this is disposed of as "an occasional jaw bone, skull fragment, or a few teeth scattered here and there." Over 100 specimens of *Neanderthal* and 20 specimens of *Homo erectus* have been found and described. In addition, the immediate ancestor of man, *Australopithecus* (man-ape and ape-man) with their weapons and relics have been uncovered and adequately described in recent decades. It is only necessary to visit any library and review a modern textbook of biology or peruse the works of Leakey, Broom, Dart, Coon, Clark, Howells, Weidenreich, Simpson and many others to realize the scope and depth of this work. All of this has more firmly established Darwin as the giant he really was. None has detracted in any way. The great Isaac Newton said that if he had seen farther it was because he had stood on the shoulders of giants. The author of this editorial would appear to be standing in a deep ditch. The entire science of biology is firmly based on evolution. Haeckel's biogenetic law states that "ontogeny recapitulates phylogeny." Evolution forms the foundation and rationale for any worthwhile study of biology, embryology or anatomy.

The ignorant man believes what he wants to. He doesn't like to be confused by facts. He is intellectually lazy and refuses to be confused by any evidence which dedicated men have labored a lifetime to produce. The scientist accumulates all the data possible and then forms his theory. If new data makes the theory untenable he does not reject the new facts but incorporates them into a revised theory. Darwin's *Origin of the Species and Descent of Man* has stood the test of time very well; the vast amount of data accumulated since it was first published in 1859 has strengthened it. No flaws have been uncovered. Darwin gave an estimate of about 1,000,000 years as the time needed for a new species to be established. This is referred to by the editor as "crossing over." It is very puerile for any one to expect to see this happen in a few decades or centuries.

The material upon which the Theory of Evolution rests is to be found in many museums throughout the world. Innumerable fossils have been tested by radioactive dating and found to be from a few thousands to many millions of years old.

In contrast to this; where are the facts, the fossils, the relics to document the theory of sudden creation? If this really happened as

recently as 6000 years ago, the proponents of this theory would have by this time accumulated a vast store of material evidence and should have established a scientific basis to support their theory. If they cannot do this, and to date they have not, they should not "bad mouth" a great man who spent many years of study and work to accumulate a vast collection of facts which firmly establishes evolution as the only hypothesis to fit the observed and recorded data.

The editor apparently prefers to put his "blind faith" in sudden creation rather than evolution. The ignorant man is proud of his "blind faith." The intelligent prefers to maintain an open mind and use that mind to study, to review the data, to carefully consider the fossil evidence and to choose the theory that is based on science.

B. C. COLLINS, M.D.

3144 Summer Ave.

Memphis, Tenn. 38112

*Editor's note:* As the author of the editorial "Darwin Revisited," and editor of the JTMA, I am happy to publish in its entirety Dr. Collins' communication concerning that editorial, with some further comments of my own, taking the editor's prerogative. As background to these comments, I should say that archaeology, geology, anthropology and paleontology have been my hobbies for over 30 years. I have an extensive library on those topics, a large collection of fossils, and many photographs. I have spent countless hours in museums of natural history. I shall assume that Dr. Collins has as carefully studied the many aspects of creation.

It is an unfortunate oversimplification to divide people into creationists and evolutionists, because there has been a vast amount of nonsense written on both sides of the issue. "Evolutionists" ascribe to the superb naturalist, Charles Darwin, and to others things they never said, while "creationists" misquote and misconstrue the Biblical account of creation. To say that the entire universe was created in the week of October 28, 4004 B.C. is contrary not only to reason, but to the Bible itself (the Bible being an imminently reasonable and practical book). The Hebrew word "day" used in Genesis can as easily be translated (and is elsewhere) "era" or "age," and there is nothing in it to preclude man's having been on the earth a million years (or 2.6 million, as Dr. Leakey's latest find suggests).



As for the "generations of Adam," from which the date 4004 B.C. was calculated by Bishop Usher, nowhere does the Bible intimate that genealogy equals chronology, and if one studies the scripture carefully, he finds it is customary to leave out generations, and in places hundreds of years, so that the term "son of" means only direct descendent, and "begat" means one was progenitor of the other. The Hebrew concept (and one with which it would be difficult to quarrel) was that the entire Hebrew race was in "Abraham's loins," so any of his descendants could be considered, and referred to, as his son, or that Abraham "begot" him.

On the other side, recent finds by Dr. Richard Leakey, far from shoring up the evolutionists' arguments, have cast serious doubts on them, and his own statement concerning his 2.6 million year old hominid with a brain as large as that of modern man is that "it is something outside the continuous one line descent of man in which *Australopithicus* gradually develops into *Homo erectus*." Dr. F. Clark Howell, professor of Anthropology at the University of California at Berkeley, has stated that it appears "there may have been many different manlike creatures, some much more human than others, which was not known before. *Australopithicus* may be out of the picture as an ancestor of man."

You have only to read these and other comments concerning these finds to realize how unstable is the fact base from which we operate as scientists. Regardless of our position, the creation of matter and of life itself resists explanation except by creation "ex nihilo." This is an area in which the reason of finite man is limited. The Biblical account of creation is not contrary to science, as geologists who have taken the trouble to study carefully the Genesis account have stated very clearly.

Space does not permit detailed documentation of flaws in the evolutionary theory, but they are numerous and, as stated previously, were recognized by Darwin. The majority of the scientific community has never faced these flaws, and many are not aware of them. Many of the most distinguished geologists and paleontologists, however, recognize that they exist, and have documented them, whichever position they happen to support. Several have written books explaining their preference for the Biblical account. (Lack of space precludes publishing either Dr. Collins' or my reference list, which

may be obtained by writing this office.) Even Sir Julian Huxley, Darwin's greatest champion, had the frankness to state that naturalistic evolution reigns unchallenged not because it has been proved, but because "the only alternative is clearly unacceptable." The alternative? Belief in creation, which presupposes a Creator.

Dr. Collins seems to have missed the point of the editorial, which was not to support the Creation theory as provable, but to show that there is a valid alternative to the evolutionary theory, that neither position is provable, and that acceptance of either is based on a certain degree of faith. The ignorant, he says, are proud of their "blind" faith. Faith is blind only insofar as we are ignorant, but we would do well to recognize how ignorant as scientists we all are, and are likely to stay, in these matters. While it is possible to take members of the Flat Earth Society into space and show them that the world is in fact round, there is no way yet available to journey back in time and witness either the creation or evolution of man. Any such theory is based on certain unprovable presuppositions. Some prefer to ascribe omniscience and omnipotence to God; others, such as Jacques Monod, to Chance.

The Bible has stood the test of time at least as well as Darwin's theory, and much longer. Truth is truth, and one truth never contradicts another. As scientists, our work is to search for truth, and to recognize a theory for what it is.

Dr. Collins, welcome to the ditch!

JOHN B. THOMISON, M.D.



CATE, WILLIAM ROBERT, Nashville, died January 19, 1973, age 79. Graduate of Emory University, 1920. Member of Nashville Academy of Medicine.

CHAMBERS, JOHN MANN, Memphis, died January 15, 1973, age 59. Graduate of University of Tennessee School of Medicine, 1936. Member of Memphis-Shelby County Medical Society.

DONALSON, L. M., Fayetteville, died January 31, 1973, age 72. Graduate of Meharry Medical College, 1932. Member of Lincoln County Medical Society.

DUFFY, RICHARD NIXON, JR., Knoxville, died January 16, 1973, age 58. Graduate of Johns Hopkins School of Medicine, 1940. Member of Knoxville Academy of Medicine.



GARROTT, WILLIAM A., Cleveland, died January 18, 1973 at age 72. He was a graduate of Vanderbilt University School of Medicine Class of 1926. Member of the Bradley County Medical Society. Dr. Garrett had just been notified by the Tennessee Medical Association that he had been named the recipient of the 1972 Distinguished Service Award which would have been presented to him at the Annual Meeting in Memphis.

HARRIS, HERSCHEL BARLOW, Chattanooga, died January 19, 1973, age 48. Graduate of Medical College of Alabama, 1953. Member of Chattanooga-Hamilton County Medical Society.

## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### GILES COUNTY MEDICAL SOCIETY

Armando C. Foronda, M.D., Pulaski  
William P. Titus, III, M.D., Pulaski

### KNOXVILLE ACADEMY OF MEDICINE

Monte B. Biggs, M.D., Knoxville  
John T. Bushore, M.D., Knoxville  
Martha S. Bushore, M.D., Knoxville  
William W. Cloud, M.D., Knoxville  
Joseph C. DeFoire, Jr., M.D., Knoxville  
C. S. Albert Ebenezer, M.D., Knoxville  
Charles W. Godwin, M.D., Knoxville  
Milbrey Hinrichs, M.D., Knoxville  
Michael Howe, M.D., Knoxville  
Harold E. Kerley, M.D., Knoxville  
Fred A. Killeffer, M.D., Knoxville  
Rodger P. Lewis, M.D., Knoxville  
Thomas H. Lowry, M.D., Knoxville  
Edward M. Malone, M.D., Knoxville  
John H. L. Marshall, M.D., Knoxville  
Cynthia McMillan, M.D., Concord  
Stephen E. Natelson, M.D., Knoxville  
William A. Robinson, II, M.D., Knoxville  
Norman H. Rucker, M.D., Knoxville  
Alex Ruth, M.D., Knoxville  
Ronald K. Sandberg, M.D., Knoxville  
C. Gerald Sundahl, M.D., Knoxville  
Emilio Verastegui, M.D., Knoxville

### MAURY COUNTY MEDICAL SOCIETY

James M. Fitts, M.D., Columbia

### MONROE COUNTY MEDICAL SOCIETY

James Lester Allen, M.D., Sweetwater

### NASHVILLE ACADEMY OF MEDICINE

Jacinta J. Llorens, M.D., Nashville  
Stephen P. Melkin, M.D., Nashville  
Mona K. Mishu, M.D., Nashville

### SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

William J. Boyd, M.D., Bristol

Locke Y. Carter, M.D., Kingsport  
Malcolm E. Rogers, M.D., Kingsport  
Frank S. Sikora, M.D., Bristol  
Robert C. Taylor, M.D., Bristol

## programs and news of medical societies

### Chattanooga-Hamilton County Medical Society

The Society held its annual President's installation banquet on January 16 at the Read House. Newly elected 1973 officers were installed including Dr. Charles Alper, President; Dr. Lee Arnold, President-Elect; Dr. Paul Hawkins, Secretary-Treasurer.

### Memphis-Shelby County Medical Society

The Society held its regular session on February 6. The Scientific Program included Dr. E. E. Muirhead, Professor of Pathology and Clinical Professor of Medicine at University of Tennessee Medical School who spoke on the topic "The Antihypertensive Function of the Kidney."

### Nashville Academy of Medicine

Officers for the Davidson County Foundation for Medical Care include Dr. John Farringer, President; Dr. Thomas Zerfoss, Jr., Vice-President; Dr. Dan Sanders, Secretary-Treasurer; and Dr. Fred Rowe, Assistant Secretary-Treasurer.

Dr. Hern Bradley, Dr. John Burch, and Dr. R. H. Kampmeier have qualified for the TMA's 50 year award which will be presented at the TMA Annual Meeting in April.

John Westenberger assumed the position of Executive Director of the Academy effective February 1.

## national news

### THIS MONTH IN WASHINGTON (From Washington Office, AMA)

The American Medical Association protested vigorously against President Nixon keeping physicians under federal regulation in Phase III of the economic controls program.

A largely voluntary set of wage-price controls was substituted for all segments of the nation's economy except food, health care activities, the construction industry, and interest and dividends.

John R. Kernodle, M.D., chairman of the AMA Board of Trustees warned that such discriminatory treatment well could result in health care support personnel leaving the field.



Physicians, he said, could not be expected to accept it.

"Controls are relaxed in other areas, yet the discrimination against physicians and some three million others who serve America's health needs is now even more sharply focused," Dr. Kernodle said in a statement. "A very real possibility exists that there will be a flight of allied, ancillary and support personnel from the health field, jeopardizing the quality of care being delivered."

Dr. Kernodle pointed out that, "even though the regulations as applied to health care were clearly discriminatory," the AMA had urged physicians to cooperate and they had done so with a result that their fees nationwide had increased by only 2.7 per cent since August, 1971, when Phase I began. This compared with 4.3 per cent for the consumer price index, 6.2 per cent for a semi-private hospital room, and 14 per cent for legal services.

Noting that controls never were imposed on lawyers or other self-employed professionals, he said that physicians now might have to reconsider their attitude of cooperation.

"Since its inception, we in medicine have made every effort to cooperate with the government's program," Dr. Kernodle said. "While the Lords of Labor walked out, we remained in the program and tried to make it work in the public interest. The results speak for themselves.

"We have received very little cooperation in return. . . .

"Thirteen months ago, we urged physician compliance. In light of the . . . record, we shall now have to reconsider that advice."

Dr. Kernodle later took the AMA protest directly to President Nixon in a letter. It follows:

Dear Mr. President:

The American Medical Association has applauded your Administration's efforts to stabilize prices and wages for the economy. The Association has supported the overall objectives of the Economic Stabilization Program and actively cooperated with the Cost of Living Council through the Health Services Industry Committee in the application of price controls on physicians' fees.

A look at the physician component of the Consumer Price Index gives an example of the effect that "voluntary compliance" can have in curbing inflation. As a result of this Associ-

ation's activities, physicians' fees rose only 1.7% under Phase II. This constitutes one-third the rate of increases prior to the Economic Stabilization Program. In this respect, we have surpassed the original expectations of the Cost of Living Council, which called for halving the inflationary rates prior to Phase I.

In view of our demonstrated success during the past year, you can imagine our dismay at the announcement of plans for Phase III. Although most of the economy is now expected to "voluntarily" adhere to the general guidelines of the Cost of Living Council, the medical profession has been placed under mandatory regulations. Indeed, the medical profession has once again been singled out under special controls. The physicians of America will not accept such discriminatory treatment. This profession must not become the victim of efforts to curb inflation in the more expensive components of the health care industry, which due to their internal financial structure have been unable to decelerate increases in their prices.

The record of the past year clearly demonstrates that physicians are able to effectively control their fees through voluntary action. The record of the past year is equally clear that physicians' fees have not been an inflationary factor in health care costs. We, therefore, request that the medical profession be exempt from special regulations under Phase III, and respectfully request an early opportunity to visit with you on this and other matters of critical importance to the nation and the medical profession.

\* \* \*

Some 126 senators and congressmen have introduced an improved and expanded version of the American Medical Association backed Medcredit bill for national health insurance.

Based on the principle of using tax credits to spur the purchase of comprehensive health insurance for all Americans, the Medcredit proposal has four chief bipartisan sponsors—Sens. Vance Hartke (D-Ind.) and Clifford Hansen (R-Wyo.), both of the Senate Finance Committee, and Reps. Richard Fulton (D-Tenn.) and Joel Broyhill (R-Va.), both of the House Ways and Means Committee.

Russell B. Roth, M.D., AMA's president-elect, joined the chief sponsors of the proposed legislation after its introduction into the Congress at a Capitol Hill press conference and detailed the new provisions of Medcredit 1973



which include dental care for children, emergency dental care for all ages, and improved home health services.

Dr. Roth said that the new Medigap proposal should cost about \$12.1 billion, approximately the same as last year's bill. He pointed out in explanation, however, that while new benefits have been added to the 1973 version, certain modifications had been made to the new bill's deductible and coinsurance features.

The Medigap bill is a three-pronged approach to providing health insurance protection, according to Dr. Roth. The proposal would:

- pay the full cost of health insurance for those too poor to buy their own,
- help those who can afford to pay a part of their health insurance cost. The less they can afford to pay, the more the government would pay,
- see to it that no American would have to bankrupt himself because of a catastrophic illness.

On the subject of the catastrophic provisions of the bill, Hartke said:

"I have been appalled, as have most of us, by the medical horror stories that have been brought to our attention. Hardly a week passes without news of yet another family pauperized by catastrophic illness. . . .

"Under Medigap, the tragedy of catastrophic illness would no longer be worsened by the threat—or the actuality—of financial catastrophe. No American family would ever again face the prospect of losing its savings, or its home, or its solvency because of health or medical bills."

Broyhill compared the Medigap bill with other national health insurance proposals in the Congress.

"According to a report prepared for the House Ways and Means Committee during the last session, the Kennedy-Griffiths proposal would have cost the taxpayers a staggering \$91 billion a year," he said. "This would have meant that health alone took up about one-third of the entire Federal budget. . . .

"Rich or poor, everyone under this proposal would have Uncle Sam pay all or most of his health care bill every year.

"The Medigap proposal, on the other hand, is designed to spread the cost of medical and health care fairly and equitably over the population on the basis of each American's ability to pay."

Stating that Medigap is designed to solve the most immediate and pressing problems of the nation's health care system, Hansen emphasized that the AMA plan would "unlock the financial doors that bar many Americans from high quality medical care . . . stress preventive care—annual check-ups, out-of-hospital diagnostic services, well baby care, dental care for children, and home health services . . . provide psychiatric care without limit. . . ."

Predicting that Medigap would wind up with 200 sponsors in the 93rd Congress . . . 25 more than in the 92nd . . . Fulton noted that a third of the sponsors were Democrats, which establishes the AMA-backed bill as the national health insurance proposal with the most bipartisan support.

"What this bill's sponsors are endorsing," Congressman Fulton said, "is an approach to the problem of financing health care. What we are all saying, I think, is that we do not believe that the federal government can—or should—assume the entire burden by itself; that we should build on what we have instead of junking it and starting out again from scratch; and that the government role should be confined to that of helping those who need help. . . ."

\* \* \*

President Nixon plans to end the 26-year-old Hill-Burton program of federal grants for hospital construction and the regional medical program. His fiscal 1974 budget also calls for cutbacks in programs for community health centers, children's mental health and alcoholism.

Under the budget, Medicare patients would have to pay an additional estimated \$1.2 billion of their hospital and medical bills in the next 18 months.

Aside from Medicare outlays of \$12.6 billion, the federal budget for health—most of it under the Department of Health, Education and Welfare—calls for expenditures of \$9.1 billion in the 12 months, an increase of \$700 million over the current fiscal year which ends June 30.

Some National Institutes of Health research programs would be cut back but spending on cancer would climb \$91 million to \$445 million, and outlays on heart and lung diseases would increase \$28 million, to \$250 million. Special emphasis would be placed on those types of cancer that cause the highest mortality—lung, breast, large bowel, prostate, bladder and pancreas. Heart research would focus on prevent-



ing arteriosclerosis and hypertension.

The NIH program of support for training of research scientists—now \$150 million a year—would be discontinued. The federal government also would reduce its support for training nurses, veterinarians, optometrists, podiatrists, pharmacists and public health personnel. Federal support would be concentrated on training of physicians and dentists.

President Nixon's plans for cutbacks in some health expenditures were foreshadowed by two vetoes of HEW appropriation bills last year.

"My strategy for health in the 1970s stresses a new federal role and basic reforms to assure that economical, medically appropriate health services are available when needed," he said in his budget message.

An HEW official described the cutbacks as "a conscious decision to identify those programs that have fulfilled their purposes already or are unable to." HEW officials said the regional medical program, which initially was designed to combat heart disease, cancer and strokes, never achieved its goal of providing better planning of health resources locally or speeding research knowledge into therapy. Support would be continued for the 515 centers established under the nine-year-old community mental health program but funds would not be provided to expand the number to the original goal of 2,000.

In the medicare program, the Administration is beginning to put into effect non-legislative reforms that are estimated to save the government \$342 million during the remainder of this fiscal year. The President said he will ask Congress for authority to shift \$600 million a year in charges to medicare patients.

The combined effect of the legislative proposals and administrative actions would be a net savings to the federal government in fiscal year 1974 of \$849 million, according to the proposed budget for the Department of Health, Education, and Welfare.

Effective January 1, 1974, if congress agrees:

—Those who are hospitalized would have to pay the first day's charge for room and board and 10 per cent of the charges for all hospital services thereafter. As it is now, a medicare patient pays \$72—the national average cost of one day in a hospital by a medicare beneficiary—for the first day of hospitalization and nothing more until the 61st day when he begins paying \$18 a day toward his charges.

A medicare spokesman said that for a patient hospitalized 13 days, the average for beneficiaries, the cost could increase from \$72 to a minimum of \$158.40. About five million disabled or aged 65 or older will be hospitalized under medicare during the next fiscal year.

—Under medicare Part B, the voluntary doctor insurance that will cover 22.5 million persons next year, the patient would pay the first \$85 of his doctor bills and 25 per cent of the remainder. He now pays a \$60 deductible and 20 per cent of subsequent charges. For a patient with a \$500 doctor bill, his share of the cost would increase from \$148 to \$188.75. About 11.6 million beneficiaries will receive medical care during the next fiscal year.

The Nixon Administration plans to let the draft law lapse June 30 for physicians and dentists as well as general military personnel.

In announcing in late January that no more draftees would be called up for military service, outgoing Defense Secretary Melvin R. Laird urged that congress approve pay incentives for military doctors, dentists, nurses and other health personnel "so that they also can be put on a volunteer basis." This led some to infer that physicians and other health personnel might be drafted before expiration of the draft law.

But the defense department later gave assurances that it was not planned to call up any more physicians, that Laird only was emphasizing the importance of the pay incentives.

The draft call for physicians was for 1600 in late 1972. There now are about 14,000 medical personnel in military service.

## medical news in tennessee

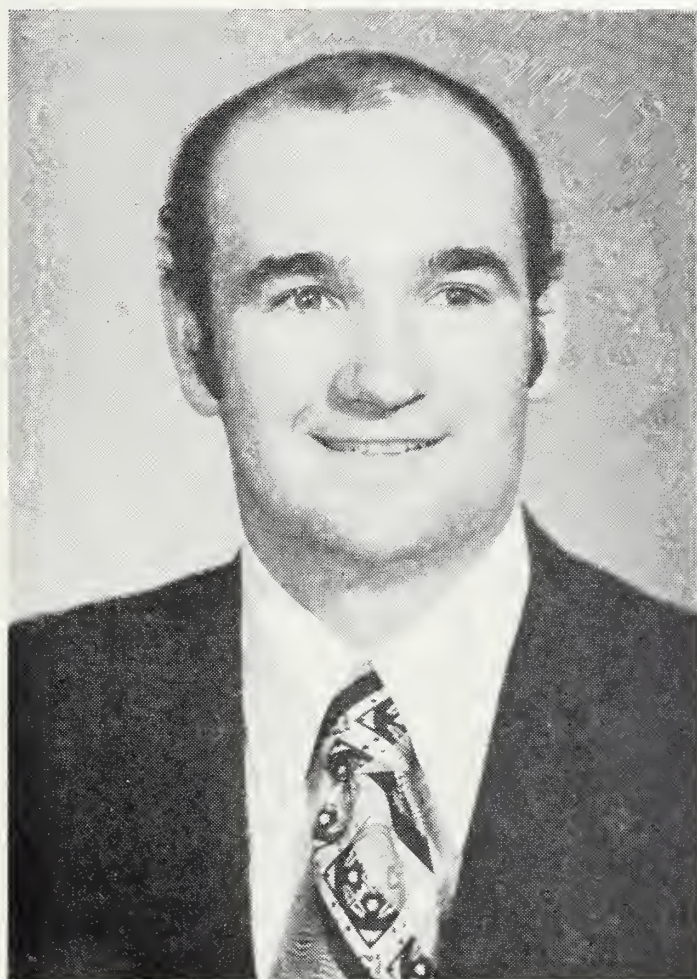
An area wide meeting of physicians and hospital administrators met recently at the Jackson-Madison County General Hospital in Jackson to discuss ways and means of attracting more physicians to the western part of the state. Officials from the two Regional Medical Programs, Tennessee Higher Education Commission, Tennessee Department of Public Health, Tennessee Medical Association, and Tennessee Hospital Association were present to participate in a panel discussion on what is



being done to improve the physician population ratio.

It was pointed out by Dr. John R. Thompson, Jr., administrator of Jackson-Madison County General Hospital that approximately 60% of the physicians training in Tennessee remain in practice in Tennessee. However there is a need for retaining more of the doctors who decide to locate outside the state.

### **Don H. Alexander Named To TMA Executive Staff**



DON H. ALEXANDER

Don H. Alexander was named Executive Assistant and Field Representative of the Tennessee Medical Association effective February 1.

He previously served as an administrative assistant with the Georgia-Tennessee Regional Public Health Services centered in Chattanooga.

A Nashville native, Alexander, 25, received the B.S. degree and Teaching Certificate from David Lipscomb College. He holds a Master of Public Health degree from the University of Tennessee.

His responsibilities with the TMA will include the development of communications and public service programs, field service activities, phy-

sician placement service administration, and various committee assignments.

### **University of Tennessee Medical Units**

MEMPHIS—The University of Tennessee College of Medicine is creating a new division of health care sciences which will coordinate the training of family physicians with an expanding university role in community medicine.

UT Dean T. Albert Farmer (M.D.) announced that the new division will supersede the Department of Preventive and Community Medicine. The new unit will be directed by Dr. John W. Runyan, Jr., professor of medicine and former head of the college's endocrinology section.

The Division of Health Care Sciences will include two departments, one concentrating on family practice and the other on community medicine. Dr. Runyan will chair the community medicine program, in addition to serving as overall director of both areas. A department chairman for family medicine is yet to be appointed.

The Department of Community Medicine will focus on means of delivering comprehensive primary care directed overall at disease prevention and health education. The Department of Family Practice will emphasize the family practice approach to health care delivery.

## **personal news**

DR. CRAWFORD W. ADAMS, Nashville, was elected Governor for the American College of Cardiology at the American College of Cardiology meeting in San Francisco, California on Saturday, February 17, 1973.

DR. ALBERT BIGGS, Knoxville, is director of the first clinical education center which has been established to improve the distribution of young doctors in the state. The Center is now in operation at the University Hospital.

DR. MAURY W. BRONSTEIN, Memphis, has been elected President of the Memphis Academy of Internal Medicine.

DR. DON CRIPPS, Smithville, has been appointed DeKalb County Physician and Medical Examiner.

DR. JOHN M. DOBSON, Memphis, has been selected to head the Radiology staff for the new Methodist South John R. Flippin Memorial Hospital.

DR. HAMEL E. EASON, Memphis, has been elected president of the Methodist Hospital medical staff succeeding DR. E. N. STEVENSON. DR. EDWARD H. MABRY was named president-elect.

DR. LLOYD ELAM, Nashville, has been appointed



to the Tennessee Health Planning Council by Governor Dunn for 1973.

DR. HERBERT GIDDENS, Huntingdon, has been elected Chief of Staff of Carroll County Hospital.

DR. OLIVER H. GRAVES, Jackson, has been elected Chief of Staff of the Jackson-Madison County General Hospital succeeding DR. ROY A. DOUGLASS.

DR. RALPH S. HAMILTON, Memphis, has been elected President-Elect of the Ophthalmological Section of the Southern Medical Association for 1973.

DR. JULIAN C. LENTZ, JR., Maryville, has been reappointed to the Council on Rural Health of the American Medical Association.

DR. GRANT W. LIDDLE, Nashville, was guest speaker at the 22nd Annual Cardiac Symposium for Physicians held recently at Erlanger Hospital in Chattanooga.

DR. WILLIAM MARSH, Chattanooga, has been named "Doctor of the Year" of the Chattanooga and Hamilton County Medical Society.

DR. NORMAN A. MCKINNON, Maryville, has been elected President of the Blount County Medical Society.

DR. H. A. MORGAN, JR., Lewisburg, has accepted the position of Health Officer of Dyer County effective January 15, 1973. He succeeds DR. W. G. SHELTON of Dyersburg who recently retired.

DR. B. F. OVERHOLT, Knoxville, has been named "Young Man of the Year" by the Jaycees.

DR. GORDON PEERMAN and DR. GEORGE HOLCOMB, Nashville, represented the Nashville Academy of Medicine at the February AMA National Leadership Conference in Chicago.

DR. ROBERT M. RUCH, Memphis, has been elected President of the Memphis Obstetrical and Gynecological Society.

DR. JOHN WILLIAM RUNYAN, JR., Memphis, has been named Director of the Division of Health Care Sciences at the U.T. Medical Units. The division will concentrate on the training of family physicians.

DR. CHARLES GORDON SELL, DR. SARAH SELL, and DR. THOMAS F. FRIST, all of Nashville, recently conducted a forum on the heart in Franklin.

DR. DAVID J. SLAGLE, Elizabethton, has been re-elected President of the Carter County Unit of the American Cancer Society.

DR. JACK SMITH, Jamestown, has been appointed to the Governor's Alcohol and Drug Dependency Advisory Commission. Also serving on the Commission is DR. JACK M. MOBLEY of Knoxville.

DR. LYNN WARNER, Dyersburg, served as the sponsoring physician for an Emergency Medical Technicians training course recently conducted in Dyersburg.

DR. ROBERT WILSON, Kingston, has resigned as Roane County Medical Officer.

DR. NAT T. WINSTON, JR., Nashville, will serve as the 1973 Crusade Chairman for the American Cancer Society.

DR. M. M. YOUNG, Chattanooga, has been ap-

pointed to a one-year term on the State Health Planning Council.

DR. GINO F. ZANOLLI, Oak Ridge, has been named Medical Director of the Oak Ridge Y-12 Plant.

## announcements

### CALENDAR OF MEETINGS

#### STATE

- |             |  |
|-------------|--|
| April 11-14 | Tennessee Medical Association, Annual Meeting, Sheraton-Peabody Hotel, Memphis |
| May 17      | Middle Tennessee Medical Association, Blue Grass Country Club, Hendersonville. |

#### NATIONAL

- |             |  |
|-------------|--|
| March 29-30 | AMA National Conference on Rural Health, 26th, Statler-Hilton, Dallas                            |
| April 1-4   | American College of Surgeons, Spring Meeting, Hilton and Americana Hotels, New York.             |
| April 2-7   | American College of Radiology, St. Francis Hotel, San Francisco                                  |
| April 3-5   | American Academy of Facial Plastic and Reconstructive Surgery, Chase Park Plaza Hotel, St. Louis |
| April 6-8   | American Society of Internal Medicine, Palmer House, Chicago                                     |
| April 9-12  | American Academy of Pediatrics, Spring Session, Sheraton-Boston Hotel, Boston                    |
| April 9-13  | American College of Physicians, Conrad Hilton, Chicago   |
| April 13    | 7th National Congress on Socioeconomics of Health Care, Marriott Motor Hotel, Chicago            |
| April 16-18 | American Association for Thoracic Surgery, Fairmont Hotel, Dallas                                |
| April 16-19 | American Association of Neurological Surgeons, Century Plaza Hotel, Los Angeles                  |
| April 23-28 | American Academy of Neurology, Sheraton-Boston Hotel, Boston                                     |
| April 25-27 | American Surgical Association, Century-Plaza Hotel, Los Angeles                                  |
| May 2-5     | American Gynecological Society, Broadmoor Hotel, Colorado Springs                                |
| May 11-12   | American Association of Clinical Urologists, New York Hilton Hotel, New York                     |
| May 13-17   | American Urological Association, New York Hilton Hotel, New York                                 |
| May 16-20   | American Pediatric Society, Hilton Hotel, San Francisco  |
| May 21-24   | American College of Obstetricians and Gynecologists, Americana Hotel, Bal Harbour, Fla.          |



May 21-24	American Thoracic Society, Statler Hilton Hotel, New York	June 20-22	Endocrine Society, Sheraton-Chicago Hotel, Chicago
June 10-14	American Proctologic Society, Detroit Hilton Hotel, Detroit	June 23-24	American Diabetes Association, Drake Hotel, Chicago
June 14-16	American Electroencephalographic Society, Statler Hilton, Boston	June 24-27	American Association of Plastic Surgeons, Waldorf-Astoria, New York
June 16	American College of Preventive Medicine, New York	June 24-28	American Medical Association, Americana Hotel, New York



## continuing education opportunities

### University of Tennessee CME Courses

The following continuing education courses are being offered by the University of Tennessee College of Medicine during 1973:

<i>Date:</i>	<i>Course:</i>
March 26-31	General Review Course for the Family Physician
April 2-3	A Clinical Approach to Common Skin Problems
April 12-13 May 9-11	Conference on the Exceptional Child Pulmonary Disease
May 9-12	Clinical Electrocardiography (Paris Landing State Park Inn, Buchanan, Tennessee)
May 14-18	Intensive Review of the Science of Anesthesiology
May 20-23	Basic Principles of Rhinoplasty

### Vanderbilt University CME Courses

<i>Date</i>	<i>Title, Location, Program Coordinator</i>
March 23-24	2nd Annual Dragstedt Surgery Symposium, Underwood Auditorium, Vanderbilt, John Foster, M.D.
April 4-6	Critical Care. (co-sponsor, American College of Physicians), Underwood Auditorium, Vanderbilt, Ms. Norma Shephard
April 27-28	Pros and Cons of Group Practice, (Organization Alternatives in Medical Practice), University Club of Nashville, Paul Slaton, M.D.
May 23-24	13th Annual Seminar in Psychiatry, Location to be announced, Vergil Metts, M.D.
July 11-12	Ky. Med. Assn., Annual Meeting Lake Barkley, Kentucky
Sept. 19-21	Endocrinology (American College of Physicians) Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.

Sept. 26-28	The Injured Child (American Academy of Orthopedic Surgeons) Underwood Auditorium, Vanderbilt, John Connolly, M.D.
Oct. 10-12	Hypertension (American College of Cardiology) Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.
Oct. 25-27	Child Neurology Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

### University of Kentucky College of Medicine

<i>Date</i>	<i>Title, Location, Program Chairman</i>
April 19-21	Pulmonary Thromboembolism, U.K. Medical Center, Kazi Mobinuddin, M.D.
April 30- May 1	Cardiac Diagnosis and Treatment, U.K. Medical Center, Borys Surawicz, M.D.
May 2-4	Symposium on Pediatric Radiology, University of Kentucky, Frank R. Lemon, M.D.
May 24-25	Annual Pediatric Review, U.K. Medical Center, Nancy Holland, M.D.

### 1973 POSTGRADUATE COURSES

These courses are arranged through the cooperation of the directors and the institutions involved. Registrations forms and requests for information are to be directed to: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104. Tuition Fees: ACP Members and Fellows, \$80; Nonmembers, \$125; Associates, \$40; Other Residents and Research Fellows, \$80.

<i>Date</i>	<i>Title and Location</i>
Mar. 22-24	CLINICAL RECOGNITION AND MANAGEMENT OF HEART DISEASE—1973, University of Arizona Medical Center, Tucson, Ariz.
Mar. 26-30	CARDIOLOGY — 1973 — TOPICS OF CURRENT INTEREST, Mount Sinai School of Medicine, New York, N.Y.



- Apr. 4-6 RECENT ADVANCES IN DIAGNOSIS AND MANAGEMENT OF PULMONARY DISEASE, Virginia Mason Medical Center, Seattle, Wash.
- Apr. 24-27 PULMONARY DISEASE, University of Pennsylvania School of Medicine, Philadelphia, Pa.
- Apr. 25-27 HEPATOBILIARY DISEASE IN CLINICAL PRACTICE, University of California, San Francisco, Calif.
- Apr. 25-27 ADVANCES IN DIAGNOSIS AND MANAGEMENT OF INFECTIOUS DISEASE, University of Wisconsin, Madison, Wis.
- May 16-18 THE RHEUMATIC DISEASES—CLINICAL AND IMMUNOLOGICAL ASPECTS, University of Texas Southwestern Medical School, Dallas, Tex.
- May 16-18 CLINICAL AUSCULTATION OF THE HEART, Georgetown University Hospital, Washington, D.C.
- May 21-25 INTERNAL MEDICINE: CURRENT CONCEPTS OF CLINICAL PROBLEMS, University of Cincinnati Medical Center, Cincinnati, Ohio.
- May 21-25 INTENSIVE CARE UNITS, St. Vincent's Hospital and Medical Center of New York, New York, N.Y.
- May 29-June 1 RECENT ADVANCES IN ENDOCRINOLOGY AND THEIR CLINICAL APPLICATIONS, Royal Victoria Hospital, Montreal, Que., Can.
- June 4-8 HEMATOLOGY, University of Washington School of Medicine, Seattle, Wash.
- June 13-15 ONCOLOGY AND CHEMOTHERAPY, University of Southern California, Los Angeles, Calif.
- June 18-22 CLINICAL ASPECTS OF BLOOD TRANSFUSION, Michigan State Univ., East Lansing, Mich.
- June 25-29 ADVANCES IN INTERNAL MEDICINE: RECENT PERSPECTIVES, 1973, Banff, Alta., Can.

### Family Planning Seminars

Special two-day, tuition-free seminars in family planning for family practice physicians and interested specialists have been scheduled in Atlanta and Jacksonville, Florida. They will focus on various aspects of family planning: the chemical and mechanical means of contraception; reproductive anatomy, physiology and biochemistry; the role of allied health personnel in family planning; and demography, human

sexuality and the socio-psychological aspects of family planning.

Sponsored by Emory University and The American College of Obstetricians and Gynecologists on the dates listed below, physicians may write or phone:

Jules M. Terry, M.D.  
Emory University  
Dept. of Ob./Gyn.  
100 Edgewood Ave. Rm. 805  
Atlanta, Georgia 30303  
(404) 659-1212 x 4213

### Dates:

(Atlanta)	March 7-9	May 10-11	(Jacksonville)
	March 29-30	May 16-18	March 26-27
	April 12-13	May 24-25	April 26-27
	April 26-27	June 28-29	May 28-29
			June 25-26

To help defray expenses, a per diem will be paid to physicians accepted for the courses.

### Symposium on Pediatric Radiology

This three-day symposium to be held May 2-4, 1973 will deal with many practical problems in the diagnosis of abdominal, chest, and skeletal disease in childhood. A distinguished guest and University of Kentucky faculty will join in presenting the conference, organized to meet the need of practicing pediatricians and radiologists.

Direct inquiries to: Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.

### Graduate Program On Mental Retardation Open to Physicians

Interested Tennessee physicians are urged to apply for a unique 21-month, full-time, graduate educational program offered at the University of Michigan in the fields of mental retardation and related disabilities.

The program is one of only two in the U.S. but "not too many physicians apply and we'd like a lot more," says Arthur W. Fleming, M.D., director. The program is sponsored by the Maternal and Child Health Service of the Health Services and Mental Health Administration of HEW.

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Further information may be obtained from Doctor Fleming, Department of Maternal and Child Health, The School of Public Health, The University of Michigan, 109 S. Observatory St., Ann Arbor, Mich. 48104.



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# “REPORT ON THE 1972 OPINION SURVEY OF THE AMA MEMBERSHIP — TENNESSEE RESPONDENTS” ❖

CENTER FOR HEALTH SERVICES RESEARCH AND DEVELOPMENT AMERICAN MEDICAL ASSOCIATION

## QUESTION I

Which *one* of the following comes closest to the policy position you would like the AMA to maintain as *your representative* on the national scene in Washington?

	RESPONSES	
	Tennessee	Total U.S.
a. Seek to retain as many as possible of the basic principles of private practice (freedom of choice, fee-for-service, voluntarism, etc.) in any governmental health program that would be adopted . . . . .	72.2%	73.1%
b. Resist any form of a government health plan except that limited to medical and related care for the poor . . . . .	20.9%	16.4%
c. I have not decided, or do not wish to state a position at this time . .	2.7%	3.3%
Other Responses . . . . .	4.3%	7.2%

## QUESTION II

There are numerous proposals before Congress for national health insurance. ASSUMING that *one* or a *combination of these* might be enacted into law, which of the following *concepts* would you prefer?

a. A plan in which the federal government, under contracts with physicians and institutional and other providers would administer and pay for most of the nation's medical care . . . . .	2.1%	4.8%
b. A plan in which federal funds would be used to pay for care of the poor; and, in which employers would be required to purchase qualified health insurance policies and plan for their employees and their families and pay most of the premium . . . . .	7.2%	9.2%
c. A plan in which the individual purchases a qualified health insurance policy or plan for himself and his family, and the federal government contributes full payment of premium for the poor, and for other income groups a partial payment related to the family's taxable income (with the federal contribution decreasing as the taxable income increases) . . . . .	56.7%	55.7%
d. A plan in which the federal government would provide financial assistance to cover only the catastrophic costs of illnesses . . . . .	16.9%	14.1%
e. None of the above . . . . .	6.2%	5.3%
f. I have not decided, or do not wish to state a position at this time . .	4.5%	4.3%
Other Responses . . . . .	6.4%	6.6%

## QUESTION III

Of the following *non-institutional non-governmental* arrangements, which would you prefer:

a. Fee-for-service ( <i>without</i> prepaid capitation)? . . . . .	74.3%	66.6%
--	-------	-------

\* Respondents from Tennessee numbered 1,676 in Tennessee and 1.8 per cent of the total 94,035 comprising 53.4 per cent of the physicians mailed to respondents nationwide.



	RESPONSES	
	Tennessee	Total U.S.
b. Contract practice (prepaid capitation system) in which you are reimbursed on a <i>fee-for-service</i> basis? . . . . .	17.0%	21.0%
c. Contract practice (prepaid capitation system) in which you are reimbursed according to a <i>negotiated formula</i> (e.g., base salary plus percentage)? . . . . .	3.8%	6.2%
d. Contract practice (prepaid capitation system) in which you are reimbursed on a <i>salary</i> basis? . . . . .	1.8%	2.5%
Other Responses . . . . .	3.0%	3.8%

QUESTION IV

If a *compulsory* nationalized health service were adopted by Congress in the near future, which of the following courses of action would you choose? (Please check the *one choice* which most nearly describes what you think you would do.)

a. Join the federal program and continue to practice in it . . . . .	23.0%	24.6%
b. Seek an administrative post in the federal program . . . . .	0.8%	1.6%
c. Continue to practice in my specialty under the federal program, but would switch to a university, hospital, industrial setting, or clinic center . . . . .	9.7%	11.7%
d. Continue my private practice with those patients who would pay my private fees, whether or not the patient pays an additional mandatory federal premium . . . . .	32.0%	28.1%
e. Leave the practice of medicine . . . . .	6.9%	7.6%
f. I have not decided, or do not wish to state a position at this time . .	23.7%	21.6%
Other Responses . . . . .	3.8%	4.7%

QUESTION V

Do you think the current situation regarding professional liability (malpractice insurance and litigation) causes *you* to order:

	RESPONSES			
	Yes	No	Undecided	Other Responses
a. <i>extra</i> lab tests, x-rays and other diagnostic procedures?				
Tennessee	69.5%	24.5%	2.4%	3.7%
Total U.S.	70.7%	23.1%	2.3%	3.9%
b. <i>extra</i> consultations?				
Tennessee	56.9%	33.7%	2.7%	6.7%
Total U.S.	59.3%	31.2%	2.9%	6.6%
c. <i>extra</i> hospitalization?				
Tennessee	47.3%	40.8%	3.8%	8.2%
Total U.S.	44.5%	42.8%	4.4%	8.5%

QUESTION VI

In your opinion is there a serious shortage in YOUR *immediate* location of practice of:

	RESPONSES			
	Yes	No	Do Not Know	Other Responses
a. physicians?				
Tennessee	27.5%	67.4%	2.8%	2.3%
Total U.S.	25.3%	69.0%	2.9%	2.8%



		RESPONSES			
		Yes	No	Do Not Know	Other Responses
b. <i>specialists</i> in YOUR specialty?					
Tennessee		20.3%	70.9%	1.9%	6.8%
Total U.S.		17.1%	72.8%	2.3%	7.9%
c. <i>residency positions</i> teaching hospitals in YOUR specialty?					
Tennessee		18.7%	59.1%	10.9%	11.3%
Total U.S.		14.9%	60.8%	12.0%	12.4%

#### QUESTION VII

In your opinion does AMA put *proper* emphasis on:

		RESPONSES				
		Yes	Too Much	Not Enough	No Opinion	Other Responses
a. Scientific Activities?						
Tennessee		67.3%	4.9%	13.0%	10.6%	4.2%
Total U.S.		66.3%	5.8%	13.3%	10.1%	4.5%
b. Socioeconomic Issues?						
Tennessee		44.7%	8.9%	27.1%	14.7%	4.5%
Total U.S.		39.3%	7.9%	35.1%	12.3%	5.5%
c. Medical Education?						
Tennessee		69.3%	1.8%	16.3%	8.9%	3.6%
Total U.S.		67.9%	4.2%	16.4%	7.8%	3.7%
d. Continuing Education?						
Tennessee		64.1%	2.4%	22.8%	7.8%	2.9%
Total U.S.		63.3%	4.5%	21.9%	6.6%	3.7%
e. Practice Management Problems?						
Tennessee		36.6%	3.9%	36.2%	19.0%	4.3%
Total U.S.		32.9%	4.6%	39.8%	17.7%	5.0%
f. Legislative Issues?						
Tennessee		49.0%	10.0%	27.9%	9.7%	3.3%
Total U.S.		44.5%	9.9%	31.6%	9.9%	4.2%
g. Membership Benefits?						
Tennessee		56.3%	6.7%	22.0%	11.7%	3.3%
Total U.S.		51.8%	7.0%	31.6%	10.7%	4.3%
h. Communication to the Public?						
Tennessee		27.1%	3.2%	59.2%	7.6%	2.9%
Total U.S.		24.1%	3.3%	62.5%	6.6%	3.4%
i. Communication to the Medical Profession?						
Tennessee		57.5%	1.7%	31.0%	6.6%	3.3%
Total U.S.		55.2%	2.4%	32.4%	6.2%	3.9%



## QUESTION VII (Continued)

### *Total Respondents*

A majority of responding AMA members indicated that AMA was placing "proper" emphasis on five areas

- *scientific activities* (66.3%)
- *medical education* (67.9%)
- *continuing education* (63.3%)
- *membership benefits* (51.8%)
- *communication to the medical profession* (55.2%)

*Communication to the public* received the lowest percentage of "yes" responses (24.1%).

The issues which received the greatest percentage of "not enough" emphasis responses were:

- *communication to the public* (62.5%)
- *practice management problems* (39.8%)
- *socioeconomic issues* (35.15%)

By comparison, the issues which received the greatest percentages of "proper" emphasis responses from total AMA membership registered the following percentages of "proper" emphasis responses in Tennessee

- *scientific activities* (67.3%)
- *medical education* (69.3%)
- *continuing education* (64.1%)
- *membership benefits* (56.3%)
- *communication to the medical profession* (57.5%)

The issues which received the lowest percentage of "not enough" emphasis responses from total AMA membership registered the following percentages of "not enough" emphasis responses among Tennessee respondents.

- *communication to the public* (59.2%)
- *practice management problems* (36.2%)
- *socioeconomic issues* (27.1%)

\* \* \*

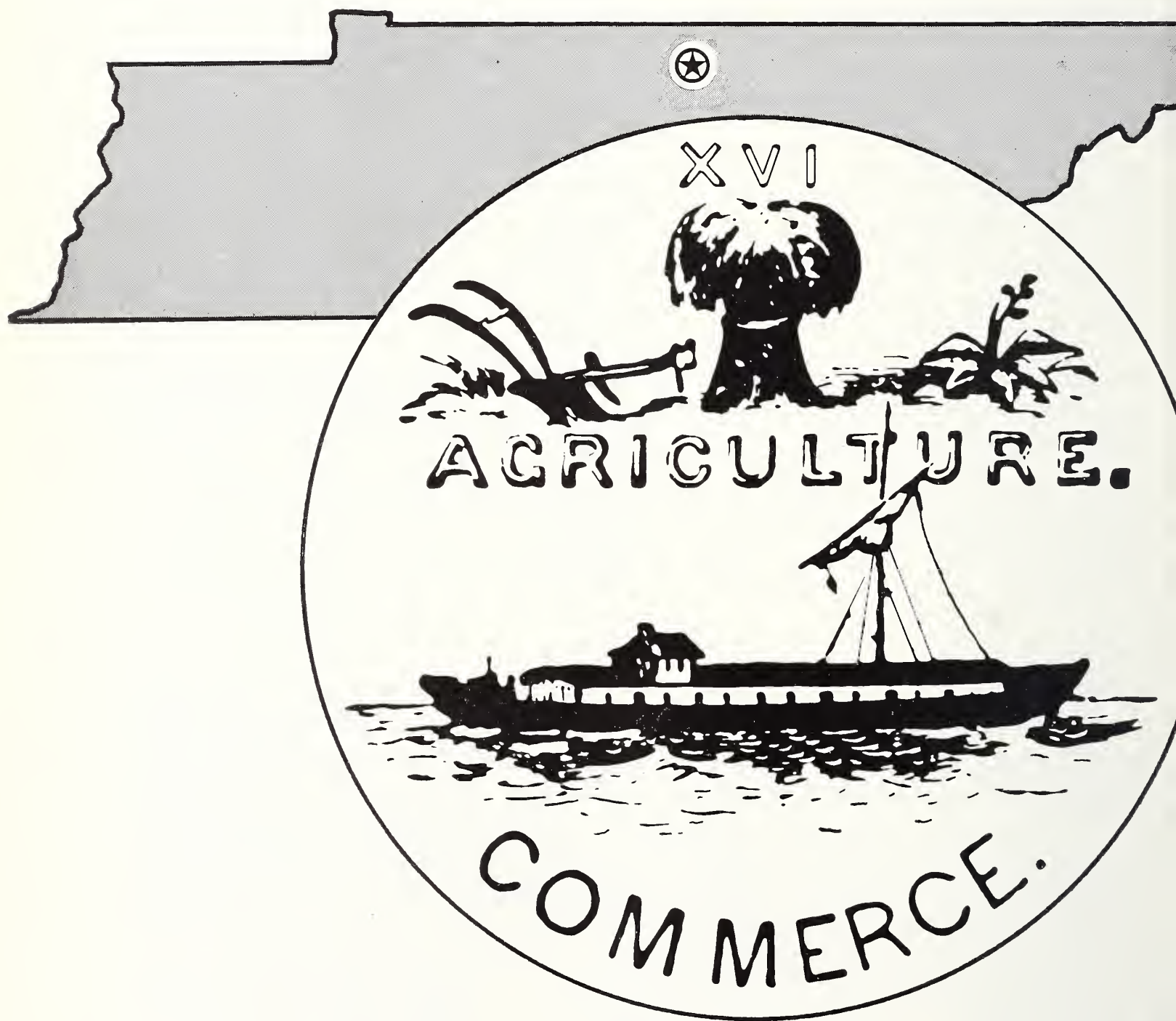
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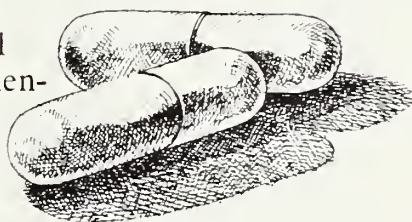
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carry one of the heaviest  
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umber of patients with  
tritis and duodenitis...  
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## Librax® helps reduce anxiety-related G.I. symptoms

A patient may blame his attacks of gastritis or  
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difficulties or some other unmen-  
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anxiety that  
has exacerbated the condition.  
Whether it is "something  
he ate" or "something eating him," adjunctive  
therapy can help. Librax offers both the antianxiety  
effect of Librium® (chlordiazepoxide HCl), that can  
help relieve excessive anxiety, and the dependable  
anticholinergic action of Quarzan® (clidinium Br),  
which can help reduce gastrointestinal hypermotility  
and hypersecretion.



## Patient-oriented dosage — up to 8 capsules daily in divided doses

For optimal response, dosage can be adjusted to suit  
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## To help relieve anxiety-linked symptoms in gastritis and duodenitis

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Each capsule contains 5 mg chlordiazepoxide HCl  
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**Before prescribing, please consult complete product information,  
summary of which follows:**

**Indications:** Patients with glaucoma; prostatic hyper-  
trophy and benign bladder neck obstruction; known hypersen-  
sitivity to chlordiazepoxide hydrochloride and/or clidinium  
bromide.

**Warnings:** Caution patients about possible combined effects  
of alcohol and other CNS depressants. As with all CNS-  
depressant drugs, caution patients against hazardous occupations  
requiring complete mental alertness (*e.g.*, operating machinery,  
driving). Though physical and psychological dependence have  
not been reported on recommended doses, use caution in  
administering Librium (chlordiazepoxide hydrochloride) to  
habitual addiction-prone individuals or those who might increase  
dosage; withdrawal symptoms (including convulsions), following  
discontinuation of the drug and similar to those seen with bar-  
biturates, have been reported. Use of any drug in pregnancy,  
lactation, or in women of childbearing age requires that its  
potential benefits be weighed against its possible hazards. As  
with all anticholinergic drugs, an inhibiting effect on lactation  
may occur.

**Precautions:** In elderly and debilitated, limit dosage to smallest  
effective amount to preclude development of ataxia, overseda-  
tion or confusion (not more than two capsules per day initially;  
decrease gradually as needed and tolerated). Though generally  
well-tolerated, if combination therapy with other psycho-  
active drugs seems indicated, carefully consider individual pharma-  
cologic effects, particularly in use of potentiating drugs such as  
sedatives, tranquilizers and phenothiazines. Observe usual precautions  
in presence of impaired renal or hepatic function. Paradoxical  
reactions (*e.g.*, excitement, stimulation and acute rage) have  
been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending  
depression; suicidal tendencies may be present and protective  
measures necessary. Variable effects on blood coagulation have  
been reported very rarely in patients receiving the drug and oral  
anticoagulants; causal relationship has not been established  
clinically.

**Adverse Reactions:** No side effects or manifestations not seen  
with either compound alone have been reported with Librax.  
When chlordiazepoxide hydrochloride is used alone, drowsiness,  
ataxia and confusion may occur, especially in the elderly and  
debilitated. These are reversible in most instances by proper  
dosage adjustment, but are also occasionally observed at the  
lower dosage ranges. In a few instances syncope has been  
reported. Also encountered are isolated instances of skin  
eruptions, edema, minor menstrual irregularities, nausea and  
constipation, extrapyramidal symptoms, increased and  
decreased libido—all infrequent and generally controlled with  
dosage reduction; changes in EEG patterns (low-voltage fast  
activity) may appear during and after treatment; blood  
dyscrasias (including agranulocytosis), jaundice and hepatic  
dysfunction have been reported occasionally with chlordiaz-  
epoxide hydrochloride, making periodic blood counts and liver  
function tests advisable during protracted therapy. Adverse  
effects reported with Librax are typical of anticholinergic agents,  
*i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and  
constipation. Constipation has occurred most often when  
Librax therapy is combined with other spasmolytics and/or  
low residue diets.



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## ANSWERS TO THE COOPER QUIZ

### from pages 236-237

*JAMA, Sept. 4, 1972*

1. FALSE. "The following conclusions have been reached: (1) There are no data to support the contention that halothane should be given no more often than every three months. (2) Halothane is a safely and easily administered anesthetic agent. (3) Halothane does cause liver damage in the rare individual, particularly following repeated exposures. The mechanism for this is unknown. (4) A careful follow-up is mandatory for every patient receiving halothane. Evidence of liver toxicity contraindicates its further use in that patient. (5) Patients receiving repeated anesthesia are drawn from different population than those receiving only one. Particular emphasis should be placed on nutrition and intercurrent drug therapy in the repeatedly exposed group. (6) If a patient seen preoperatively has received halothane recently and sufficient time has elapsed to allow symptoms of an untoward reaction to appear, a careful search by history and by physical and laboratory examination should be directed toward detection of such a reaction. If this investigation yields negative results, the choice of anesthesia should be governed by the requirements of the operation and the experience of the anesthetist. (7) All anesthetic alternatives to halothane have dangers associated with their use. (8) The distinction between 'major' and 'minor' anesthetics is unjustified and should not govern the selection of anesthetic agent. (9) The informed anesthesiologist is best prepared to make the choice of anesthesia." (p. 1142)
2. TRUE. "Strontium 87m scanning was performed on 30 children with suspected infection involving the musculoskeletal system. All 20 patients, who in final analysis were considered to have septic arthritis, osteomyelitis, or diskitis, had positive scans.

*Sept. 11, 1972*

3. TRUE. "Echocardiography is a useful, safe, non-invasive procedure for evaluating cardiac function and anatomy. Diamond et al demonstrated that echocardiographic findings were specific in right ventricular overload secondary to atrial septal defects or tricuspid regurgitation. Abnormal inter-ventricular septal movement was observed in all instances in which a left-to-right shunt existed." (p. 1243)
4. TRUE. "When it is present, abnormal septal motion is suggestive of right ventricular volume overload. However, it is not present in all patients with an increased RVD index or an elevated pulmonary-to-systemic flow ratio (or both). Although echocardiography seems to be a good screening test, it is not specific enough to differentiate among the defects that produce right ventricular volume overload nor to differentiate a patient with an abnormal volume from one with a normal volume." (p. 1245)

5. FALSE. "Unlike bronchial cancer, which has assumed almost epidemic proportions in many countries, cancer of the trachea is rare, and cancer of the larynx is uncommon. Laryngeal cancer, nevertheless, resembles bronchial cancer in being essentially a disease of men who smoke." (p. 1253)
6. TRUE. "There are definite indications for a surgical approach to the solitary thyroid nodule. These include the nonfunctioning nodule in men and women younger than 40 years of age, a thyroid nodule in a child with a history of irradiation of the neck, any solitary nodule in a man over 40 years old, nonfunctioning solitary nodules in women over 40 years old, and situations in which calcification seen on x-ray films is suggestive of thyroid cancer." (p. 1265)
7. FALSE. "Catheter-associated urinary tract infection (UTIc) is a significant infection hazard despite available methods of prevention. Many UTIc pathogens are transmitted between catheterized patients by passive carriage on the hands of attendants. A recent study of *Serratia marcescens* UTIc demonstrated that the risk of urinary tract colonization varied directly with the extent of clustering of such patients. Their geographic dispersal, especially separation of those infected from those noninfected, warrants trial as an adjunctive measure for prevention of UTIc." (p. 1270—Abstract)

*Sept. 18, 1972*

8. TRUE. "A number of agents may affect vitamin B<sub>12</sub> or folate metabolism. Among these agents are the oral contraceptive drugs which appear to cause malabsorption of polyglutamic folate and may induce megaloblastic anemia in some women. The infrequency of megaloblastic anemia secondary to the use of these agents appears obvious from the fact that millions of women used them for almost a decade before this untoward effect was recognized." (p. 1371)
9. FALSE. "The data presented herein demonstrate a significant reduction of serum B<sub>12</sub> levels in women taking oral contraceptives. This reduction can occur within five months and serum levels may fall to values indistinguishable from other forms of vitamin B<sub>12</sub> deficiency. In spite of the drastic reduction in serum levels found in some women, no anemia or evidence of tissue depletion was detected. Also no detectable change in serum B<sub>12</sub>-binding proteins occurred. This study also confirms the work of others in demonstrating a reduction in serum folate in women taking oral contraceptives. In addition, the simultaneous reduction of both serum B<sub>12</sub> and folate levels was demonstrated in some of these women. Oral administration of folic acid had no effect on serum B<sub>12</sub> values in three of these subjects, suggesting that the serum vitamin B<sub>12</sub> decrease was not secondary to folate deficiency." (p. 1374)
10. FALSE. "The protein content of ascitic fluid was determined in 26 patients with intra-abdominal neoplasms or inflammation in whom patency of the portal venous system was evaluated directly



at laparotomy or autopsy. Ascitic fluid was high in protein content (respectively 54% and 62% of the plasma level) in both groups except when portal system occlusion was superimposed on the underlying disturbance, in which case ascitic fluid was low in protein content (respectively 8% and 24% of the plasma level). Viewed in the light of observations on the protein content of ascitic fluid in patients with hepatic cirrhosis, these data suggest that, in the absence of marked hypoproteinemia, peritoneal fluid of low protein content signifies marked impairment to portal blood flow into the liver." (p. 1380)

11. GOOD. "All sources of fuel are needed to supply the increasing power needs of a growing population. Atomic fuel competes economically with fossil fuels under most conditions and eliminates undesirable environmental pollution by stack effluents. Both fossil- and atomic-fueled plants have waste hot water which necessitates controls to prevent changes in the ecology. The 25-year record of health and safety of atomic energy programs in the United States should be comforting to the public. Radiation exposures from commercial power reactors have been a very small fraction of permissible limits, and the Atomic Energy Commission has recently further restricted releases from such reactors so that the average exposure to the public will be only about 1% of that from the natural background." (p. 1392)
12. TRUE. "James Wilson has dog preparations for comparative steroid effectiveness in preventing shock lung. Food and Drug Administration-rated equivalent doses of corticosteroids were given. The dogs in which he used pharmacologic doses of dexamethasone developed cardiac arrhythmias. Ninety percent of them died within a few minutes after the administration of the drug, and the remainder died before the conclusion of the experiment. This was in contradistinction to his dogs which received methylprednisolone sodium succinate, 30 mg/kg of body weight, and survived remarkably well.

"Whether these arrhythmias were the result of the drug itself or the preservatives cannot be said." (p. 1403)

EDITOR'S NOTE: The evidence here quoted is experimental but the paper describes cardiac arrhythmias in a human after dexamethasone administration.

*Sept. 25, 1972*

13. TRUE. "Malignancies must be diagnosed before they can be cured. Our study suggests that during the last half-century there has been some improvement in the diagnosis of cancer in American municipal hospitals, but this improvement has been limited. In 1922, Wells found clinically unsuspected cancer in 32.6% of all patients with cancer at autopsy, whereas 50 years later we found this error in 26.2% of similar patients representing a 6% improvement in clinical cancer diagnoses. However, our study has shown that an added 13.9% of all cancer patients had incompletely diagnosed cancer which almost al-

ways (97%) was fatal. We cannot be sure how many of these patients with incompletely diagnosed malignancy would have been included by Wells in this 'not diagnosed' group. Our review of clinical charts suggests few patients with 'suspected-unconfirmed cancer' had sufficient antemortem evidence to support clinical diagnoses of cancer. If these patients are considered together with the undiagnosed group there are 906 patients or 33.2% with 'not diagnosed' cancer, a figure very similar to those of both Wells and Willis." (p. 1474)

*The New England Journal of Medicine Sept. 7, 1972*

14. TRUE. "The measurement of serum thyroxine is an indicator of the total hormone present in the serum in both bound and free forms. It is directly dependent on the protein bound portion which constitutes the bulk of the total serum thyroxine in normal individuals.

"Physiological factors such as pregnancy or estrogen use, altering the thyroxine binding globulin (TBG), are reflected in the value for the serum thyroxine. The resulting score can be misleading, thus imposing a serious diagnostic problem in many patients." (p. 1483)

15. FALSE. "In the general population the incidence of PDA at sea level is about 0.04 per cent, but rises to 0.72 per cent at high altitude. In a four-year period in our hospital the incidence of PDA in premature infants weighing 1750 g or less at birth has been 15.3 per cent. The incidence within the group did not rise with increasing prematurity. Although the precise explanation is not known, several factors may account for this high incidence of PDA in premature infants." (p. 476)

16. FALSE. "Our results suggest that early operative intervention may be essential for survival. All six infants required assisted ventilation for IRDS; the onset of the signs of PDA was associated with progression of the pulmonary disease and severe heart failure developed in all. The only survivor was an infant in whom operative closure of the ductus arteriosus was done at the age of eight days, when pulmonary function had just begun to worsen. Because the condition of these infants deteriorated rapidly, we recommend early catheterization and operative closure of the PDA as soon as the pulmonary status begins to worsen—before irreparable lung damage occurs from severe pulmonary edema superimposed on severe IRDS." (p. 477)

EDITOR'S NOTE: IRDS = Idiopathic Respiratory Distress Syndrome

17. FALSE. "The cause of the hypoalbuminemia present at the outset of treatment may be due to a multiplicity of factors. Increased catabolism may result from definite albuminuria. Decreased synthesis may be due to protein deprivation, the uremic state, and hyperosmolarity. Decreased albumin concentration may also be a dilutional effect in patients with excessive extracellular-fluid volumes.



"Conversely, the improvement in albumin concentration and in total exchangeable albumin demonstrated in this study must result from increased protein intake, from an improvement in the toxic state created by uremia, and from a decrease in serum osmolarity. The effective oncotic pressure has been shown in isolated liver perfusion studies and in vivo to affect the rate of synthesis of albumin. Repeated dialysis results in a striking decrease in the proteinuria as urine volume diminishes. Careful management of water intake will prevent the dilutional effect of overhydration. Whatever the cause of the hypoalbuminemia, frequent dialysis after a relatively normal protein intake is critical in its correction.

"The ultimate aim of unattended home dialysis—rehabilitation of the chronically uremic patient as a functioning member of society—is only possible if a reasonable degree of health and strength is attained. That this is possible is attested by the return to full activity of the majority of the 46 patients in this program. (p. 480)

EDITOR'S NOTE: The patients in this study were fed 80 grams of protein a day and had dialysis three times a week. (Total of 24 to 30 hours.)

Sept. 14, 1972

18. TRUE. "Table 1. Summary of Drugs Useful in Treatment of Parasitic Infections. (p. 496)

INFECTION	DRUG
Helminths:	
Tapeworms:	
<i>T saginata</i> ,	Niclosamide; quinacrine
<i>T solium</i> ,	
<i>D latum</i> ,	
<i>H nana</i>	
Roundworms:	
<i>E vermicularis</i>	Pyrantel; pyrvinium; piperazine; thiabendazole.
<i>A lumbricoides</i>	Pyrantel; piperazine; thiabendazole.
Strongyloides	Thiabendazole; pyrvinium.
Trichuris	Hexylresorcinol enemas.
Trichinella	Thiabendazole; steroids.
Hookworms	Tetrachlorethylene; bephenium; pyrantel, thiabendazole.
Creeping eruption	Thiabendazole
Trematodes:	
<i>S japonicum</i>	Tartar emetic
<i>S mansoni</i> &	Hycanthone; niridazole, antimony dimercaptosuccinate; stibophen.
<i>S hematobium</i>	
Clonorchis	None
Protozoa:	
Malaria	Chloroquine-primaquine; quinine; pyrimethamine; sulfonamides.
Amebiasis	Tetracycline; emetine; metronidazole; chloroquine; di-iodohydroxyquin.
Giardiasis	Quinacrine; metronidazole."

19. FALSE. "The syndrome of iodide-induced hyperthyroidism (Jodbasedow) is not common and has been reported to occur in patients with iodine-deficient goiter after iodide replenishment. As part of a larger study to assess the effects of iodide administration on thyroid hormone synthesis in normal subjects and in patients with various underlying disorders of the thyroid, iodides (5 drops of a saturated solution of potassium iodide) were administered in eight patients with nontoxic goiter residing in Boston, an area of iodine sufficiency. Hyperthyroidism developed during and after iodide administration in four of the eight—an unexpectedly high frequency. This finding suggests that the homeostatic mechanism controlling thyroid hormone synthesis and release in these patients is not functioning normally. We recommend that large doses of iodides not be administered to patients with nontoxic goiter." (p. 523—Abstract)

20. TRUE. "Ouabain significantly improved the impaired LV function of patients with AMI. These patients did not have ischemic cardiac pain at the time of the study, and only four of the 16 patients were in clinical 'LV failure.' Before 'routine' use of digitalis can be recommended in such patients, we need to know the effects of digitalis on ventricular size and on myocardial oxygen consumption and whether there are long-term clinical or hemodynamic benefits of such therapy."

21. FALSE. "Bacterial concentrations exceeding a certain number of colonies per milliliter of urine are not proof of the renal origin of the bacteriuria. Systemic factors, such as overhydration, dehydration, or reduced concentration ability, as well as local factors, such as bladder volume and emptying frequency, may alter bacterial concentrations in either way so that spuriously low or falsely high concentrations may ensue.

"If an infection is localized in the lower urinary tract, dilution by freshly secreted urine can only reduce the count concentration, provided the rate of urine flow is high, the bladder emptying time short and the residual volume minimal. If any one of these factors is not present the dilution effect may either not appear or be grossly blunted.

"Conditions within the kidney are somewhat different, and resemble continuous cultivation systems in which fresh medium (urine) is constantly supplied and the culture drained off at the same time. Below a certain perfusion flow more bacteria will be produced than will be carried away, and thus their concentration in the drainage fluid will rise to a 'climax' level; above a certain flow more bacteria will be carried away than will be produced, so that their concentration will tend progressively to lessen to 'sterility.' Sudden acceleration of the perfusion flow in a slowly draining infected parenchyma will lead to a washing out of bacteria from well perfused areas, as well as perfusion of previously underperfused loci, inside or even outside the renal parenchyma. As a result,



an initial elevation of bacterial concentration in the drainage fluid and a subsequent drop-off will be observed, provided no obstruction of outflow is present." (p. 533)

22. FALSE. "Reversible nonobstructive hydronephrosis and hydroureter can be produced by urinary-tract infections. Reversible hydronephroses and hydroureters, without urinary-tract infection but accompanied by peritonitis, are rare. In the three cases reported below, hydronephroses and hydroureters were apparently concomitant symptoms of generalized peritonitis. The hydronephroses were of the nonobstructive type and disappeared spontaneously within four to 20 months after onset." (p. 535)

EDITOR'S NOTE: Permit us to quote the last paragraph of this paper.

"It should be emphasized that the association of peritonitis and hydronephrosis and hydroureter, if overlooked, may confuse the clinical picture and result in unnecessary diagnostic procedures."

Sept. 28, 1972

23. FALSE. "Among 24 patients with gonadal dysgenesis who had been treated for five or more years with stilbestrol, endometrial carcinoma developed in two and possibly in a third. Three cases of endometrial carcinoma in patients with gonadal dysgenesis have previously been reported by others. Three of the five definite carcinomas were of an unusual mixed, or adenosquamous, type. The cancers were detected at an average age of 31 years. The only reported case of endometrial carcinoma in an untreated patient with primary amenorrhea occurred at the age of 79 years. The early age at occurrence of this unusual type of tumor suggests a carcinogenic role of exogenous estrogens in these patients." (p. 628, Abstract)

24. TRUE. "*Headache*. Robinson found no relation between hypertension and headache; Badran et al. observed none except among persons with diastolic pressures greater than 130 mm of mercury, in whom there was a greater prevalence of headache. This finding in persons of very high diastolic pressure would probably account for the clinical teaching that headache is a symptom of hypertension. Unfortunately, in the present study too few patients had such high diastolic pressures for meaningful analysis.

"*Epistaxis*. The findings presented are at odds with those of Mitchell, who measured the blood pressure of patients whose primary symptom was epistaxis. Of patients without apparent nasal abnormality to account for the bleeding, 75 per cent had a diastolic blood pressure higher than 95 mm of mercury in comparison with only 6 per cent of a control group of patients with nasal disease. The difference persisted after age adjustment. The current study found no association of epistaxis with high blood pressure, and despite differences in methodology and study population, the conclusions of the two studies are not readily reconciled. However, even if epistaxis is associated with hypertension, it is a relatively infrequent symptom, for

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even under the broad definition used here (any nosebleeds at any time) only 7 to 14 per cent of persons reported it.

"Other symptoms. Robinson found no association between dizziness and hypertension; in the present study dizziness was more common only in persons with very high diastolic blood pressure (higher than 110 mm of mercury). The prevalence of tinnitus did not vary with blood pressure." (p. 633)

25. FALSE. "The present study was prompted by the occurrence of bacteriologic relapse in several patients with *H. influenzae* meningitis treated with ampicillin in accordance with the most stringent recommendations.

"One of the most striking differences between the treated groups was the presence of fever, which was more prolonged and of greater magnitude in ampicillin-treated patients. These findings are similar to those of Schulkind and his associates, who noted prolonged fever in 21 ampicillin-treated patients as compared with 16 recipients of chloramphenicol. Previous reports had indicated no significant differences in the febrile response of patients with *H. influenzae* meningitis to ampicillin and chloramphenicol treatment.

"Six recipients of ampicillin suffered bacteriologic relapse. Although this was a retrospective chart review and there are conditions that may have changed over the years, one cannot overlook the fact that no relapse occurred with chloramphenicol therapy.

"Relapse of *H. influenzae* meningitis after chloramphenicol treatment has been reported. In all but three cases, failure occurred in patients who received a portion of their treatment intramuscularly, a route now known to be unreliable and one no longer sanctioned." (p. 636)

26. TRUE. "Our data demonstrate that statistically significant individual variation in serum urate levels may occur in healthy people during the course of a year. Furthermore, transient hyperuricemia may be more common than has heretofore been suspected, especially if serial samples are examined. This phenomenon of transient hyperuricemia appears to be unrelated to any readily determined pathologic condition. In agreement with larger series, we found no significant differences between white and black men in serum urate levels.

"Rubin and his co-workers, studying the interrelations between repeated determinations of serum urate, cholesterol and cortisol levels, noted a considerable variability in urate values in the same subject. Furthermore, in the Framingham study, a higher percentage of the male population showed at least one elevation if four biennial determinations were considered than if only a single determination was considered. The unexpected finding of an apparent seasonal influence deserves further evaluation. Banerjee and Saha observed no seasonal influence, and we have found no other studies of the effects of sunlight or seasons on serum uric acid levels. Interestingly

enough, we have induced significant urate elevations with artificial sunlight in two normal volunteers.

"This study demonstrates that serum urate values are very labile, and that day-to-day transient elevations and seasonal variations are important factors to consider whenever one attempts to evaluate the importance of age, sex, stress, drugs, heredity, or socio-economic effects, etc., upon serum urate levels." (p. 650)

*The Archives of Internal Medicine Sept. 1972*

27. TRUE. "Although combining anemias associated with infection, malignancy, and rheumatoid arthritis may mask pertinent differences, evidence strongly suggests similar, if not identical, mechanisms in the pathogenesis of the anemia. Abnormalities in iron metabolism are well described in this type of anemia. This study corroborates the finding of low serum iron level and low TIBC in these patients. There was no correlation between marrow iron stores and serum iron levels or relative percentage saturation of transferrin, when the TIBC was below 280 $\mu$ g/100 ml. Bone marrow biopsy showed iron in the marrow of 31 to 40 chronically ill patients. In 21 of these cases iron stores were distinctly increased, a finding considered to be characteristic of the syndrome." (p. 325)

28. FALSE. "Therefore, we suggest that a relative impairment in protein synthesis is the determining factor in the low levels of albumin, transferrin, and erythropoietin seen in the anemia of chronic disorders. The additional observation that albumin and transferrin are reduced in proportion to the severity of the anemia (and presumably, therefore, to the severity of the underlying disease) suggests that this impairment extends to all the proteins involved in hematopoiesis, including those concerned with erythropoietic stimulation, iron transport, and protoplasmic synthesis. The similarity of this anemia to the anemia of protein deficiency further supports this unifying concept. The inability to increase the synthetic rate of a wide variety of proteins reflects the severity of the disease and disappears upon correction of the underlying disease process." (p. 326)

29. FALSE. "Changes in levels of serum cholesterol and triglycerides with physical training are not of great magnitude. Siegel et al found small but significant decreases in mean serum cholesterol values after conditioning and a variable decrease in serum triglycerides. Mann and associates also found decreases in cholesterol level, but noted an increase in triglycerides after training which was attributed to an increased dietary intake. In this study there was no appreciable change in values for serum cholesterol or triglycerides." (p. 345)

30. TRUE. "Left ventricular function has been studied in patients with acute myocardial infarction by relating cardiac output to left ventricular filling pressure and measuring the alterations that occur following volume expansion. Such studies have



demonstrated that the left ventricle in acute infarction does operate on a ventricular function curve and that maximum cardiac output is obtained when the filling pressure of the left ventricle is between 20 and 24 mm Hg. Elevation of the left ventricular filling pressure beyond 25 mm with dextran infusion often does not produce further increase in cardiac output and on occasions may lower it. Even in patients with congestive heart failure and cardiogenic shock complicating the acute infarction, the left ventricular filling pressure may vary over an extremely wide range. Therefore, in patients with depressed ventricular function accompanying myocardial infarction, such as those presented in this study, left ventricular filling pressure was regulated around 18 to 22 mm Hg. In patients whose initial filling pressures are above 25 mm Hg, reduction of filling pressure would be indicated by phlebotomy or diuretic therapy to the optimum range. On the other hand, patients whose filling pressures to 18 to 22 mm Hg by dextran infusion." (p. 375)

*The Annals of Internal Medicine Sept. 1972*

31. FALSE. "The 150 patients were divided into three groups according to date of implant: those implanted between 1961 and 1964 and followed for 70 to 108 months (group A); those implanted in 1965 and 1966 and followed for 45 to 69 months (group B); and those implanted in 1967 and 1968 and followed for 24 to 44 months (group C).

"These data show an improved survival among the paced patients compared with unpaced patients but a decreased survival compared with a matched sample from the general population. Survival rates were higher in patients in whom pacemakers were implanted after 1964 than in patients with earlier implants. The overall survival rates for our study group were comparable with those reported by Morris and associates and Torresani and colleagues.

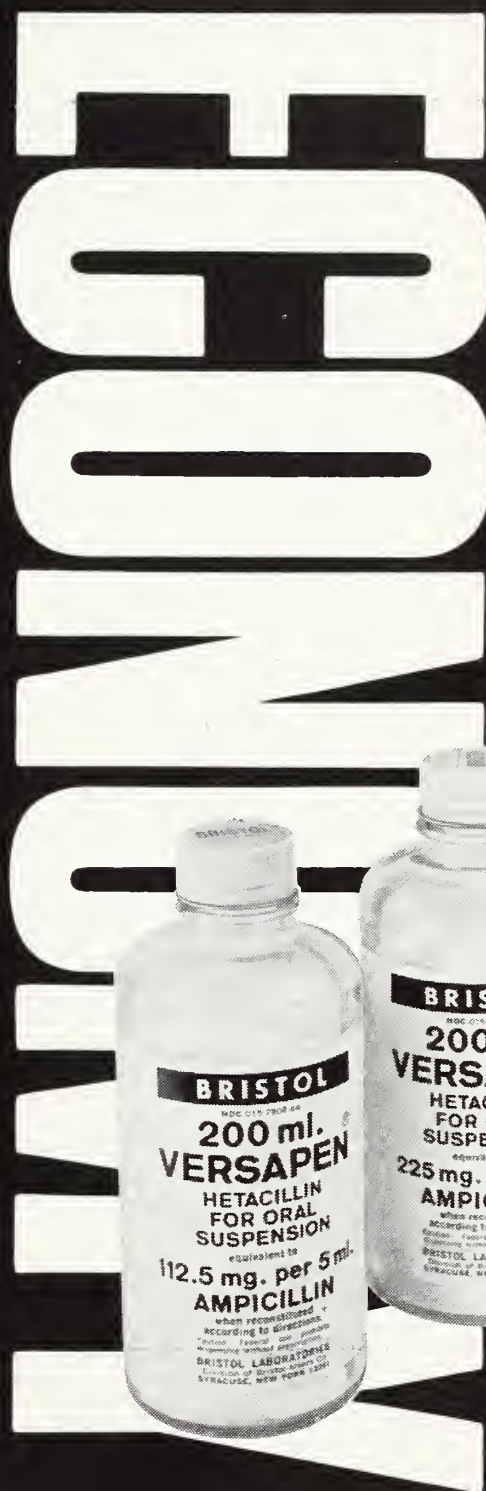
"Sudden death occurred in 6 of the 34 deaths in group A, in 2 of 18 deaths in group B, and in 1 of the 9 deaths in group C. The total of 9 sudden deaths is substantially higher than the 4.2 sudden deaths expected ( $P < 0.05$ ) from a matched general population sample from the Tecumseh study. Postmortem examinations were made in 5 of the 9 sudden-death patients (4 in group A, 1 in group B), and there was no evidence of acute myocardial ischemia. None of the nine patients exhibited clinical symptoms immediately before death, which suggested a major or minor myocardial ischemia episode." (p. 346)

32. TRUE. "Of the 20 patients who were paced for refractory congestive heart failure, 16 were initially improved. After 2 years, 17 of the 20 patients had survived, and 13 continued to show marked improvement.

"Twenty-six patients had congestive heart failure for the first time after pacing was started, compared with an expected 6.3 cases ( $P < 0.001$ ). Time of occurrence after the initial implant varied,

*(Continued on page 299)*

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with 10 cases occurring during the first 6 months of pacing and 11 additional cases, after from 7 to 24 months of pacing. The other five patients developed congestive heart failure from 30 to 54 months after the implant.

"Thirteen of the 26 patients had a disease predisposing to development of congestive heart failure. Five patients were diabetic, four were hypertensive, two had experienced an acute myocardial infarction, one carried a concurrent diagnosis of Paget's disease, and one patient was thyrotoxic at first presentation. The prevalence rates of rates of diabetes mellitus and coronary artery disease in this subgroup were similar to those reported in the Framingham study, but hypertension was less prevalent in the paced group. Analysis of other clinical data did not disclose any associated diseases, signs, or symptoms by which congestive heart failure after pacing could have been predicted.

"With medical management 4 of the 26 patients became asymptomatic, 9 were improved but had residual symptoms, 6 showed no clinical change, and 7 developed more severe congestive heart failure." (p. 347)

33. TRUE. "Permanent ventricular pacing of patients has produced excellent long-term survival rates. Physicians may optimistically assure pacing candidates that acceptance of a pacemaker does not involve risks of mortality and morbidity appreciably greater than found in the normal population. Patients permanently paced for refractory congestive heart failure complicating atrioventricular block respond excellently to pacing and are not subject to higher risk of mortality than other paced patients. Paced patients may develop congestive heart failure for the first time after pacing; many will respond to standard pharmacologic therapy and can therefore be adequately treated by the alert primary physician. The incidence of myocardial infarction and cerebrovascular accident in paced patients appears to be no greater than in the general population." (p. 350)

34. FALSE. "Our results suggest that in patients with diabetic neuropathy the capacity for marked digital vasoconstriction is generally maintained, even when evidence indicates autonomic insufficiency elsewhere. These wide fluctuations in cutaneous blood flow depend primarily on the vasoconstricting influence of the adrenergic sympathetic nerves. Therefore, prompt vasoconstriction to almost zero blood flow in response to cold strongly suggests that peripheral sympathetic fibers are intact. Although increased vessel sensitivity to circulating catecholamines accounts for considerable vasoconstriction in sympathectomized patients, it is not likely to cause such complete vasospasm in response to cold. One could argue that local factors related to diabetic microangiopathy might cause vasoconstriction, but ischemia is a stimulus to vasodilation rather than vasoconstriction. This is

illustrated by reactive hyperemia following cold-induced vasoconstriction and successful arterial surgery for an ischemic limb.

"Only 1 of 19 subjects appeared to be totally autotympathectomized in the present study." (p. 354)

35. FALSE. "Thrombocytopenia occurred on two separate occasions in a patient while she was receiving sodium cephalothin. After recovery, a test dose of cephalothin (1 g) produced a 50% drop in the platelet count." (p. 401)

36. TRUE. "Although triiodothyronine ( $T_3$ ) was first discovered in 1952 by Gross and Pitt-Rivers, its physiological importance was not clarified until development of sensitive methods for measuring this iodoaminoacid. We now know that  $T_3$  plays a major role in producing the hyperthyroid state. In 1968 we first described a syndrome of hyperthyroidism caused by  $T_3$  elevation only, which we have termed  $T_3$  toxicosis. Recently we have also noted that  $T_3$  levels may be elevated for some time before the development of the usual form of thyrotoxicosis, thus serving as a premonitory manifestation of the hyperthyroid state.

"Over the past year we have studied 10 patients from our endocrine clinic who, after treatment of the usual form of thyrotoxicosis and a period of euthyroidism, developed recurrent hyperthyroidism with  $T_3$  as the only elevated iodoaminoacid." (p. 410)

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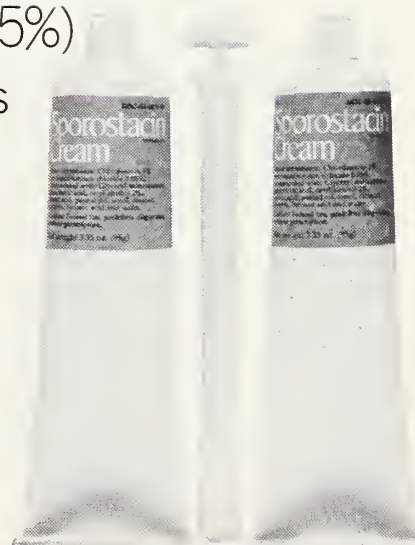
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## *Diagnostic Applications of Ultrasound in Obstetrics: A Review*

G. WILLIAM BATES, M.D.

In the past five years there has been a widespread interest in the application of ultrasonics to the specialty of obstetrics and gynecology. Through the pioneering efforts of Donald in Scotland, Hellman, Kobayashi, Taylor, Gottesfeld, and others in the United States, the diagnostic usefulness of ultrasonics in this speciality has been established. While older techniques are being refined, new applications are being discovered so the ultimate usefulness of the modality remains unknown. Ultrasonic studies have largely been confined to the academic institutions due to lack of equipment and trained personnel, but gradually, it is finding its way into smaller clinical settings.

Until recently the obstetrician has had only limited access to the fetus and intrauterine milieu, relying primarily on his clinical judgment in predicting the outcome of pregnancy. New advances in biochemistry, immunology, nuclear medicine, and sonography now permit the obstetrician to directly and indirectly survey the intrauterine milieu, and better select the fetus and mother at risk so that appropriate therapy can be rendered. The purpose of this paper is to outline the clinical situations that can be diagnostically aided by sonography.

Before any drug or diagnostic technique can be utilized in the pregnant woman, its safety must be established to prevent deleterious effects in the mother, the unborn fetus, and the progeny of the fetus. It must not cause terato-

genic effects or chromosomal aberrations. A number of investigations have been performed in establishing the safety of ultrasound in the gravid woman, and several are worthy of mention.

The early reports of MacIntosh<sup>15</sup> in studies isonating human lymphocytes demonstrated an increased number of chromosomal aberrations in isonated cells. His work stimulated other investigations, particularly in Great Britain. Donald and Hellman<sup>2</sup> in a combined study analyzed for fetal anomalies the outcome of 1114 apparently normal pregnancies isonated at various stages of gestation. Both continuous and pulsed ultrasound were given at a frequency of 2MHz, not exceeding 10 mW/cm.<sup>2</sup> The overall incidence of fetal anomalies was 2.7%, and no increased incidence of anomalies occurred in fetuses exposed during the period of organogenesis. These results were compared with 63,238 nonisonated deliveries, which had an anomaly rate of 4.8%.

Watts<sup>19</sup> compared the number of chromosomal aberrations of isonated human lymphocytes in tissue culture with control samples and found no increased incidence of chromosomal damage. This work was substantiated by Abdulla<sup>1</sup> by exposing cultured lymphocytes to both diagnostic and therapeutic intensities through stepwise increase. He noted red cell aggregation at high intensities, but no increase in chromosomal abnormalities.

Lucas,<sup>13</sup> studying chromosomes in newborn infants receiving continuous ultrasound for monitoring fetal heart rate during labor, found no difference in the chromosomes of 24 isonated infants and 12 controls. McClain<sup>14</sup> in a teratologic study exposed pregnant rats during the

From the Department of Obstetrics and Gynecology, University of Tennessee Memorial Research Center and Hospital, Knoxville, Tenn.

Presented at The Ultrasonic Medical Diagnostic Symposium, The University of Tennessee, Knoxville, Tenn., December 5-6, 1972.



period of organogenesis from day 8 thru day 13 of gestation to diagnostic levels of ultrasound for periods ranging from 1½ to 2 hours. Post-mortem examination following delivery showed no soft tissue or skeletal abnormalities in the treated groups. Thus, despite scattered reports casting doubt on the safety of ultrasound, its safety for use during pregnancy appears to be well established.

### CLINICAL APPLICATION

The earliest applications of sonography to the obstetrical patient were in the areas of detection and monitoring of the fetal heart during pregnancy and labor and in measurement of the biparietal diameter of the fetal skull using the A-mode scan. Utilizing continuous ultrasound and the Doppler principal, the fetal heart beat can be perceived as early as 12 weeks, whereas with the conventional fetoscope the earliest detection of the pulsating fetal heart is at 17 to 18 weeks gestation. Continuous sonography is now being incorporated into fetal monitoring units, replacing the phonocardiogram for external fetal monitoring during labor.

### FETAL MATURITY

For years the obstetrician has been seeking methods to aid in the determination of fetal maturity in order to appropriately time delivery in high risk infants to avoid the problem of prematurity. Reliance on menstrual history and estimation of fetal size by palpation are notoriously unreliable. X-ray studies of fetal bone maturation have proven helpful, but expose the fetus to ionizing radiation and have inherent diagnostic limitations. Biochemical studies of the amniotic fluid including measurement of creatinine, lecithin and osmololality give accurate prediction of fetal maturation, but again expose the mother and fetus to a slight risk in obtaining the amniotic fluid specimen.

The early studies of Donald<sup>3</sup> demonstrated the usefulness of sonography in outlining and measuring the fetal head. Calibration of the A-scope provided an accurate means of measuring the fetal biparietal diameter and subsequent studies with the compound B-scope have provided fetal head measurements within the accuracy of  $\pm 2$  mm. Weingold<sup>20</sup> evaluated fetal head size in 75 patients undergoing repeat Cesarean section, utilizing both the A- and B-mode scope in longitudinal and cross sectional scans. Serial measure-

ments were obtained at 14 day intervals beginning at the 32nd week of gestation. His serial measurements showed a linear growth rate of the fetal head with average measurements of 7.8 cm at 32 weeks, 8.0 cm at 34 weeks, 8.6 cm at 36 weeks, 8.7 cm at 38 weeks, and 9.1 cm at 40 weeks. The previous work of Taylor<sup>16</sup> had shown that 91 percent of infants with a BPD of greater than 8.5 cm would weigh in excess of 2500 grams, and 97 percent with a BPD of 9.0 would weigh more than 2500 grams. On the basis of this work, Weingold established criteria for his study that infants with a biparietal diameter less than 8.4 cm would be premature, 8.5 to 8.6 borderline, and greater than 8.7 cm mature. Of the 75 patients, 12 went into spontaneous labor, necessitating obligatory C-section. Four of these had measurements of less than 8.4 cm and were premature, five were in the borderline zone for maturity with measurements of 8.5 to 8.7, and the other three were mature. The remaining 63 patients who were carried to a sonographic measurement of 8.7 cm, underwent elective repeat Cesarean section and all were mature, weighing in excess of 2500 grams. Fetal head measurements were obtained post delivery with calipers and correlated within  $\pm 2$ mm of the sonographic measurement. Technical sources of error were found in patients with deep engagement of the vertex, occiput anterior and occiput posterior presentation, and in breech presentation with the vertex under the costal margin. Weingold compared his results with 107 patients undergoing elective repeat C-section where the decision to operate was made on history, clinical findings, and x-ray, and noted an overall prematurity rate of 16 percent.

Hellman and co-workers<sup>8</sup> have shown a linear growth pattern of the BPD in normal, diabetic, and hypertensive patients, independent of retarded or accelerated fetal somatic growth.

Utilizing the fact that biparietal diameter increases in a linear fashion, Hellman, Kohorn, and others have derived formulae, based on the BPD, to predict the fetal weight. Ianniruberto<sup>9</sup> applied these formulae to 100 normal pregnancies isonated for BPD within 48 hours of labor. Fetal weight was estimated within a mean accuracy of 368 grams but such wide individual variations occurred that the authors concluded that this method had little clinical usefulness. Previous data in correlating BPD with fetal maturity were confirmed.



## PLACENTAL LOCALIZATION

For years the obstetrician has sought ways to localize the placenta, especially in patients with suspected placenta previa. The growing use of amniocentesis has further increased this need. X-ray soft tissue placentography, though useful, is frequently unreliable, and isotopic placental scanning and placental arteriography carry maternal and fetal risks. The ultrasonogram is accurate and safe in placental localization, and is beginning to replace these other methods. In early studies, Gottesfeld<sup>5</sup> reported a 97% accuracy rate in placental localization but could not localize the low lying posterior placenta. Donald<sup>4</sup> corrected this weakness by decreasing the frequency from 2.5 MHz to 1.5 MHz and adjusting the gain. Kobayashi and Hellman<sup>10</sup> evaluated 100 patients undergoing hysterotomy for C-section or therapeutic abortion and correlated the sonographic location with the implantation site found at surgery. They were able to localize the placenta accurately in 95%. Scans were obtained utilizing the full bladder technique, and a 2 MHz transducer. They were able to adjust the gain without changing the frequency, and produce excellent scans.

Kohorn<sup>12</sup> compared localization utilizing the B-scan and 99<sup>m</sup> technitium scintillation scanning in 50 patients. The placenta was accurately localized in 46 patients using both techniques, but the ultrasonic method was superior in that it visualized the fetus and the relation of the fetus and placenta to the internal os of the uterus. Though he felt the ultrasonic method was the method of choice, the isotopic scan was recommended for use in smaller hospitals.

## DIAGNOSIS OF INTRAUTERINE FETAL DEATH

When fetal death occurs, amniotic fluid penetrates the epidermis and underlying tissues with subsequent epidermal separation, protein breakdown, and the creation of new tissue—fluid interspaces. This results in changes in the acoustical impedance resulting in a “fluffing” of the fetal outline. Gottesfeld<sup>6</sup> screened 113 patients with suspected fetal death on the basis of absent fetal heart tones, cessation of fetal movement, vaginal bleeding, and retarded uterine growth. Sixty patients were found by sonographic criteria to have fetal death in utero, forty-seven patients carried viable pregnancies to term, and six patients were lost to follow

up. Within the first 12 hours of fetal death, “fluffing” appears, and though suggestive of fetal death, is not pathognomonic as it may be seen in pregnancies complicated by diabetes mellitus and Rh isoimmunization. Within forty-eight hours of death, there is a marked increase in “fluffing” with collapse of the fetal skull and thorax, and difficulty in demonstrating the fetal vertebral column.

In early pregnancy, Donald<sup>4</sup> and Hellman<sup>8</sup> have demonstrated the appearance of a trophoblastic ring at four weeks. At eleven weeks a fetal echo can be demonstrated, and beyond twelve weeks the fetal head with a midline echo appear. Early fetal death or missed abortion can be suspected when these outlines fail to appear or the sonogram shows loss of definition, fragmentation, or a break in the gestational sac. Twenty-five patients with suspected missed abortion were followed with serial sonograms and 15 were proven by D & C to have a missed abortion. The remainder had normal growth patterns sonographically, and subsequently carried to term.

## DIAGNOSIS OF ECTOPIC PREGNANCY

Ultrasonic diagnosis of the ectopic pregnancy has been less reliable than culdotomy and laparoscopy. Kobayashi<sup>11</sup> evaluated 21 cases of surgically proven ectopic pregnancy and established a correct diagnosis in 16 or 76.2%. Varma<sup>18</sup> was able to correctly diagnose 18 ectopic pregnancies in 20 surgically proven cases. Criteria for an ectopic gestation are: (1) diffuse amorphous uterine echoes, (2) uterine enlargement, and (3) absence of an intrauterine pregnancy. Extrauterine findings include an irregular poorly defined mass containing some echoes, and an ectopic gestational sac.

## DIAGNOSIS OF HYDATIDIFORM MOLE

Molar tissue, which consists of small fluid-filled vesicles, lets ultrasound through easily. With low intensities, the uterus appears to be almost empty, but when the intensity is raised, multiple echoes fill the entire uterus, producing a scatter effect. Numerous investigators have established the usefulness of the B-scan in this entity. Donald reported observations of this entity in 1961. Nineteen moles were confirmed by Taylor,<sup>17</sup> et al, in 78 suspected cases. The material included one false negative but no false positive findings. In the series described by Gottesfeld,<sup>7</sup> 17 hydatidiform moles were demon-



strated in 61 suspects examined by the B-method with no false positive results. Other reports have similar accuracy. In patients who have been treated for trophoblastic disease, a rise in the gonadotropin titer may indicate a pregnancy or a recurrence of the trophoblastic disease. A sonogram demonstrating the presence or absence of a gestational sac will aid in this difficult differential diagnosis.

### OTHER APPLICATIONS

The safety and reliability of diagnostic ultrasound in pregnancy have been well established. In pregnancies with concomitant ovarian or uterine lesions such as cysts and tumors, sonar may be useful in establishing the location and character of the lesion. In patients with indwelling intrauterine devices who are suspected of being pregnant, sonography will localize the IUD and demonstrate signs of pregnancy without exposing the patient to ionizing irradiation or intrauterine manipulation, and a diagnosis of multiple gestation can be established several weeks prior to the radiographic demonstration of skeletal calcification.

### CONCLUSION

It must be kept in mind that diagnostic ultrasound is not to be used in isolation but as a supplementary aid to other diagnostic procedures. As interest becomes widespread, equipment more refined, and more physicians become trained, the application of ultrasound to obstetrics and gynecology and other fields of medicine will increase. The potential of this diagnostic method remains to be established.

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*To live content with small means; to seek elegance rather than luxury, and refinement rather than fashion; to be worthy, not respectable, and wealthy, not rich; to study hard, think quietly, talk gently, act frankly; to listen to stars and birds, to babes and sages with open heart; to bear all cheerfully, do all bravely, await occasions, hurry never. In a word, to let the spiritual, unbidden and unconscious, grow up through the common. This is to be my symphony.*

W. E. CHANNING, 1818-1901

# *The Role of the County Medical Society\**

NORMAN A. McKINNON, M.D.

I believe that if we are to anticipate the continued independence of the private physician a sound effective county medical society is absolutely essential. The hospital staff will not fill this roll. May I emphasize that the hospital staff is a separate organization, although it is made up of most of the same people who are members of the county medical society.

The hospital staff does not speak for the doctors. Medically and economically it is an organization that of necessity must be hospital oriented and must answer to a bureaucracy which is made up of non-medical people. It is your county medical society that will represent your views. I hope it will serve to take them to our state society and eventually to the national organization, the A.M.A.

I am sorry to say that not every practicing physician in the county is a member of this local society or the state or A.M.A. They all have their reasons for not joining. These assemblies may not always be to our liking, and we may disagree, but they are our organizations. The county medical society is the only one that truly speaks for the doctor, and from our local society, as representatives to the state and national associations.

If these organizations do not always express our view points then let's work through the county medical society to get our ideas across. I hasten to add that these are not only political organizations, but are scientific groups too. The splendid history of medical care in this country is in great part due to the influence of the county, state and national medical societies. Dr. William Sodeman has succinctly summarized this in the *A.C.P. Bulletin* and the *AMA Medical News*, Oct. 2, 1972.

We stand at the threshold of a great many

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\* Presidential Address, Blount County Medical Society.

changes in the delivery of medical care, with the dignity of the physician and his independence to take care of his patients as he sees best threatened by third party interference. This independence is what has made America really outstanding in the field of medicine. All of these things are gradually being taken away from us by the sophistry of politicians and the syllogistic reasoning of bureaucrats. If we do not stand strong together and face this challenge I am afraid that many of us will see the practice of medicine change greatly in our lifetime, and it may not be to our liking.

Just let me give you one example of what your county medical society can do for you. If you recall a few months ago the Aetna Life Insurance Company challenged the physician's right to be able to set a fee which was agreeable with the doctor and patient for services performed. This insurance company interjected itself between the doctor and patient and even threatened to go to court if the patient decided not to pay the physician's bill. It was not the hospital staff that challenged this concept; it was the medical society and the A.M.A. In fact, it was one of our local county medical societies that introduced a resolution into the state society, and then on to the A.M.A., that was effective in bringing about a reversal by the insurance company in this terribly unprofessional attempt to interfere with the doctor-patient relationship.

Hospital staffs are fragmented into many hospitals. Your medical society is made up of all the doctors in the community . . . or at least those who chose to join. In unity there is strength. The cacophony of many leaderless voices may be ignored. The county medical society can be your ombudsman. Let me urge you to join in helping make our society a strong group that will represent our views and can act to help the physicians in the practice of medicine.



# Red Cell (Packed Cell) Transfusions: An Appeal to Reason

JOHN V. PETRUCCI, M.D.\*

The American Association of Blood Banks is currently sponsoring workshops throughout the country on component therapy and has published a pocket-sized booklet which discusses this subject.<sup>2</sup> At least one hospital in the greater Baltimore area has sent a copy of this booklet to all its staff members. Despite all of these efforts, red cell transfusions are not given as frequently as they should be. It is stated by the American Medical Association Committee on Transfusion and Transplantation that, "It is likely that from 60% to 80% of blood transfusion needs can and should be met by use of red blood cells (rather than whole blood)."<sup>1</sup>

Two major objections to the use of red cell transfusions are usually raised.

*First objection:* The acute loss of whole blood should be replaced by whole blood since the volume of a unit of red cells is considerably less than that of whole blood.

Obviously, massive acute hypovolemia due to blood loss requires replacement by whole blood. However, in most cases involving acute blood loss, especially surgical blood loss, the loss is not massive. I would estimate that in most cases, acute blood loss at surgery is no more than 1000 ml. If this loss were to be replaced with red cells, the overall volume difference is only 400 ml. Usually the patient is also receiving a physiological solution during surgery. This can easily replace the 400 ml. In fact, the use of balanced salt solutions alone is advocated by some authors.<sup>2</sup>

The acute loss of 450 ml of blood within six to ten minutes carries an infinitesimal risk in a healthy adult. Some 6 million individuals a year experience such a blood loss, namely blood donors.

*Second objection:* The surgical patient does better with whole blood since he needs the proteins which are present in the plasma.

Actually, an average serving of meat or two eggs will supply more protein than the plasma from one transfusion.<sup>2</sup> If a patient truly requires

supplemental proteins, the therapy of choice would be salt-poor albumin or purified protein derivatives. These products have the great advantage of not transmitting hepatitis.

The ability of an individual to replace his proteins is remarkable. It is perfectly safe in most instances to remove up to 1000 ml of plasma every week for many months in a healthy individual. In fact, these are the standards set by the American Association of Blood Banks.<sup>3</sup>

The positive reasons for the use of red cells rather than whole blood are many. I will only point out the most important ones.

Most patients who have a red-cell-mass deficit do not have a significant plasma volume deficit. In fact, they usually have a plasma volume excess. In studying the blood volume reports for a one-year period at Mercy Hospital, it was found that 154 patients had red-cell-mass deficits. The recommended therapy in 152 (98.7%) of these patients was red cell transfusions. If whole blood were to be used to replace the red-cell-mass deficit, 152 of these patients would have been overloaded, some to a very significant degree.

One of the often overlooked reactions to blood transfusions is overloading. Although it is very difficult to prove, this may be the cause of a significant number of deaths. Acute pulmonary edema, as we all know, is the immediate cause of death in many hospitalized individuals.

Most blood transfusions are given to increase the patient's oxygen carrying capacity. Only the red cells in blood accomplish this purpose.

The use of red cell transfusions reduces the amount of potassium, sodium, citrate, ammonia, and acid transfused. The benefits of this are obvious. The transfusion of the waste products found in donor blood would also not appear to be beneficial.

If plasma can be salvaged as a result of red cell transfusions, it can be frozen and used therapeutically in many instances. It can also be fractionated into many useful products such as albumin, Factor VIII, gamma globulin, hyper-

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immune globulins, and fibrinogen. The list of therapeutic fractions is steadily increasing and many fractions are in short supply. Physicians charged with the responsibility of treating hemophiliacs are surely aware of the shortage of Factor VIII concentrate.

Lastly, since many authorities have urged the use of red cell transfusions instead of whole blood transfusions, and there are instances where whole blood transfusions may be contraindicated, it may soon become a medicolegal issue. For instance, could the use of whole blood transfusions rather than red cell transfusions be the grounds for a malpractice suit?

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Sweet Charity

At least part of the reason some doctors feel vaguely dissatisfied with the practice of medicine is that it is now almost impossible to be charitable in giving care. A good many are in medicine partially as a result of the attractiveness of that image of a kindly, benevolent doctor doing kindnesses and generally giving aid and helping free-of-charge those so unfortunate as to be sick and penniless at the same time.

That isn't to say that the same young dreamers didn't know that a good and comfortable living could be made in the practice of medicine. But there must be more to a job or a career to make it satisfying and attractive enough to spend an entire lifetime at it. The acquisition of money is rarely a good enough reason in itself to spend any more that whatever time is required at a job to collect enough money for whatever the immediate needs might be.

The opportunity to be a benefactor in any endeavor is a subtle enticement and it is this that has been partially lost. More money cannot make up for this loss. It is not just those in the medical profession who feel this loss, but we are familiar with and can cite specific illustrations as the issue applies to the practice of medicine.

There is now a penalty affixed to any charitable venture in a doctor's office through the use of fee profiles now kept on every doctor who makes charges through any governmental or insurance company program. Every time a reduced fee is recorded, the average is reduced making it impossible to collect a normal or a reasonable fee from someone else about whom the doctor need not feel quite so charitable. This is probably enough in itself to put an end to any

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charitable impulse but when the realization occurs that the real beneficiary is the federal government or some insurance Goliath, the impulse hasn't a chance. If the date happens to be about April 15th, the impulse is short-lived indeed.

During the arguments over Medicare it was pointed out by the medical profession that many millions of dollars worth of free care were being given yearly to the aged and that an inevitable result to Medicare would be that physicians' incomes would be increased by government payments for what was formerly free. The argument was lost. Medicare became law. Another avenue for charitable giving became the government's. Physicians' incomes, of course, went up and physicians were immediately indicted for making more money at the expense of the program. The very same thing happened with Medicaid.

It seems the term "charity" is becoming one of those strange, archaic and anachronistic words like one from Shakespeare or Chaucer. Charity is now *welfare*. The only ones allowed to feel charitable anymore are social workers employed in a federally-financed program. A shabby imitation of a cardinal virtue it must be for them, too.

Preachers speak of charity but seldom practice it. The Church, too, has lost its charitable role to the government and ecclesiastics meditate on lost feelings of Christian spirituality. It does seem strange that as the traditional concept and meaning of charity is destroyed by government, the people lose faith in government, and some even hope.

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# *A Brief Look at Methadone Maintenance<sup>†</sup>*

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ROBERT D. FINK, M.D.\*\*

Methadone Maintenance has become a useful adjunct in the treatment of narcotics addiction and is employed as one of the modalities of therapy at the Tennessee Psychiatric Hospital and Institute. Historically, the hypothetical medical rationale for employing a "substitution addiction" was based on Dole's emphasis that the addict sustained a physiologic (metabolic) abnormality which caused a "narcotics hunger," which, even when he was motivated to be drug-free, caused him to seek relief through narcotics. Treatment failures, through "talk therapies," with a few notable exceptions, were considerable and reached proportions sufficient to suggest that psychotherapy for this patient population was a useless expenditure of time and money. Man's attempts to live better chemically fostered by the philosophy of Timothy O'Leary and the Vietnam conflict in the late sixties and early seventies caused an increasing number of addicts to emerge, and the new clinical entities now were no longer from the Black ghetto but involved every segment of society. Communities were experiencing astronomical increases in their crime index and in some urban areas 50% of all arrests were drug-related.

Philosophically, Methadone Maintenance emphasized law abiding and productive behavior rather than abstinence per se, and thus had great political and social appeal. Dole's original studies indicated a very favorable trend in decreasing felonies and other illegal patterns of behavior, along with showing significant, positive, social and vocational changes in the addict's life. In Britain forty-four ambulatory clinics for dispensing narcotics to addicts were established between 1919 and 1923. However, until the innovative work of Dole and Nyswan-

der in 1964, the concept of making a narcotic available was not tried in this country. To some degree the acceptance of this concept was based on significant differences between Methadone and other narcotic agents. Methadone is a synthetic narcotic discovered by the Germans during World War II as a "spin-off" from the research done on Meperidine.

The qualities of this drug which make it applicable for treating the narcotics addicts are, (1), it is an inexpensive, long acting drug lasting for twenty-four hours and thus, can be given in a one time a day dosage. (2) Initially, it was also described as providing a "blockade" against the euphoric effects of opiates (heroin) and other synthetic narcotics. This referred specifically to the ability of the drug to produce tolerance to other narcotic agents and the usual dosages of other narcotics are not sufficient to overcome this effect. Therefore, it becomes senseless for the addict to seek the euphoria from other narcotic agents. Thus, the hope of Methadone Maintenance is to provide an inexpensive, available, legal narcotic which is long acting and blocks the euphoric effects of opiates and other synthetic narcotics, and it is to some degree accomplished by this drug.

Theoretically, such a program is designed to stop the necessity for "copping" (making contact for purchasing of drugs), the craving for narcotics, "dealing" (selling of drugs), and anti-social behavior (prostitution, theft, etc.) to get enough money to support the addict's habit. The criteria for success include improvement in the area of interpersonal relationships (marriage, parents, friends, etc.), legitimate employment (finding a job, less absenteeism, increased productivity, fewer job changes), absence of legal difficulty, a diminution of drug usage, and involvement in a rehabilitation program. These parameters emphasize the increase of personal responsibility and a change for focus from drug-centered behavior.

Patients who apply for admission to our Methadone Maintenance Program must meet the following requirements: (1), a documented history of dependence on one or more opiate drugs for at least two years; (2), a confirmed history of one or more failures of treatment for their physiological dependence; (3), must be over eighteen years old; and (4), must not be psychotic. After the initial Clinic contact, a social history is obtained and verified, and

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a thorough physical examination, laboratory examination, and psychometrics are performed. The applicant then goes before an admissions committee. If accepted into the Program, he signs a contract which commits him not only to follow the rules of the Clinic, but which also forces him to show improvements in the areas of vocational performance and interpersonal relationships.

Patients come on a daily basis to the Clinic for their medication, and at this point no carry-out Methadone is given. Urine screens are obtained on a random basis twice a week. Patients who fail to come for medication, along with those who have drugs other than Methadone found in their urine screen, are immediately contacted and brought before the Methadone Maintenance Clinical Committee for reevaluation. An addict who continues to have "dirty urines," missed days from the Clinic (failure to come for Methadone), legal difficulty, or who fails to follow the original contract, is withdrawn from Methadone and encouraged to seek some other rehabilitation program.

Studies other than ours have indicated that lower dosages of Methadone Maintenance (less than 50mg. per day) in the motivated patient are just as effective as high dose Methadone Maintenance (greater than 80mg. per day) in the successful participation of the addict in this type of program.

There are many common misconceptions concerning Methadone Maintenance. One of the more common is the difference between Methadone Maintenance and Methadone withdrawal. Methadone withdrawal is the process of detoxification of the individual who is addicted to narcotics. This process involves initial stabilization with Methadone and then gradual withdrawal over a seven to ten day period, with the ultimate goal of reducing withdrawal symptoms and getting the individual to a drug-free state. Methadone Maintenance implies an indefinite time period where the individual is stabilized with Methadone on a prescribed daily dosage. Some workers in this field are now employing the concept of prolonged Methadone withdrawal. The concept of prolonged withdrawal involves initial stabilization and maintenance on a daily dose until the individual has begun to give evidence of a positive change

in his psycho-social rehabilitation; then, over a prolonged period of time, anywhere up to one year, their maintenance dose is gradually reduced.

Another misconception concerning Methadone is that it stops all forms of drug dependence. Certainly the physician should recognize that there is no evidence that it alters the psychological and physiological effects from CNS stimulants, sedatives, hypnotics, hallucinogens, or cannabis derivatives. Some Maintenance programs have indicated that extremely large numbers of their patients abuse alcohol. Another confusing area concerns the individual who is on Methadone and requires analgesic medication either pre- or post-operatively. There is ample evidence to indicate that analgesia at the usual prescribed dosage provides adequate pain relief for the individual who is being maintained. Also, due to the number of deaths from Methadone over-dosage in children, because of carry-out programs where Methadone was given in large amounts to take home, the drug has frightened many public health authorities. Essentially, Methadone is no more toxic or lethal than any other narcotic agent. However, due to its prolonged duration of action, the individual who takes an over-dose of this drug has to be intensively observed for a more prolonged period of time than with the shorter acting narcotics agents. We have found Naloxone Hydrochloride (Narcan) to be the antidote of choice for Methadone over-dosage, along with indicated symptomatic treatment. Though there are many who feel that Methadone is a non-addicting drug, certainly it is highly addicting, and according to many of our patients, its withdrawal is much more uncomfortable and undoubtedly more prolonged than that from other narcotic agents.

Although our Clinic has gathered only preliminary statistics concerning the effectiveness of the Methadone Maintenance Program, we feel to some degree encouraged by the improvement demonstrated in a large percentage of our patients. In order to work successfully with this patient population, one cannot assume that simply supplying Methadone on a daily basis solves the problem of the addict. What is becoming clear, however, is that many of our patients who were inaccessible to psychotherapeutic modalities become more amenable once they are stabilized on Methadone.



## John Gaston Hospital\*

### ACUTELY AGITATED PSYCHOTIC PATIENT

DR. CHARLES H. HUBBERT: This morning we have selected a case for presentation because of its illustrative value in differential diagnosis and management of the acutely agitated, aggressive, psychotic patient. Dr. Wilson will present the patient.

DR. JOHN WILSON: The patient is a 42 year old black male who was first seen in September and October, 1971, in the Emergency Room and Neurology Clinic, presenting with a chief complaint of "blackout spells." A history of blackouts for approximately five years was obtained. They were said to occur from once a month to twice a week. The episodes were described as beginning with nasal stuffiness followed by tachycardia and diaphoresis and then loss of consciousness for several minutes. After regaining consciousness he showed mental confusion, disorientation, headache, and irritable hostile behavior for several hours. A history of tonic-clonic movements was not obtained.

Physical examination and neurological examination in the Neurology Clinic on 10/1/71 showed no abnormalities. Laboratory tests and x-ray studies including CBC, urinalysis, chest film and electrolytes revealed nothing remarkable. A lumbar puncture revealed no abnormalities, the EEG was interpreted as normal and skull films were read as revealing no definite abnormalities. Because of a blood glucose reported to have been 47 mg% during the Emergency Room visit a glucose tolerance test was done and showed: 30 min.—94 mg%, 60 min.—85 mg%, two hours—60 mg%, three hours—76 mg%, four hours—102 mg%, and at five hours—80 mg%.

The patient was begun on Dilantin 100 mg, t.i.d. and phenobarbital 30 mg, t.i.d. He was lost to followup until 5/24/72 when he appeared at a community health clinic waving a knife and manifesting severe psychomotor agitation. He was subdued by eight policemen and taken to jail after he slashed the shirt of one policeman. He was transferred to John Gaston Psychiatric Unit on 5/25/72. Psychiatric examination revealed an extremely hostile, agitated and combative black male who was extremely uncooperative and appeared to be confused and psychotic. After sedation, physical and neurological examination was performed and revealed no abnormalities. Routine laboratory studies and x-ray studies revealed no abnormalities. Electrolyte determinations and SMA-12 screening were normal. To further evaluate the flat glucose tolerance test and to help rule out an insulinoma a tolbutamide tolerance test was done and interpreted as normal.

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Because of a positive serology (VDRL) of 1-2 dils, a lumbar puncture was done and all tests were entirely normal, including VDRL.

The patient's agitated, psychotic behavior abated within four hours of admission after treatment with Dilantin 100 mg, t.i.d., phenobarbital 30 mg, t.i.d., and chlorpromazine 300 mg, q.i.d. He was amnesic concerning the events surrounding his admission. He rapidly became cooperative, logical, relevant and coherent. He gave a history of falling out of a window during a "spell" one month prior to admission. Later, psychological testing revealed findings consistent with mild mental retardation without evidence of psychosis.

Because of the history of onset of apparent seizures during adult life, the psychomotor quality of the seizures with behavioral changes, and recent history of falling out of a window during a seizure, cerebral arteriograms were done to rule out surgically correctible pathology. A right retrograde brachial arteriogram is shown in fig. 1 showing large arteriovenous malfor-



FIG. 1—Right retrograde brachial arteriogram showing large arteriovenous malformation.

mation. A followup EEG showing intermixed slowing in all leads and more prominently in the temporal areas is seen in fig. 2. A technetium pertechnetate brain scan was normal, but a cerebral blood flow study showed increased flow in the right hemisphere in the area of the malformation.

The patient remained composed without aggressive behavior throughout the remainder of his five weeks hospitalization except for occasional hallucinations of his family standing in the room with him. He realized his violent behavior in part but could not understand it. His difficulties and findings were discussed with him, and the need for continuous regular medication, both anticonvulsants and tranquilizers, was impressed



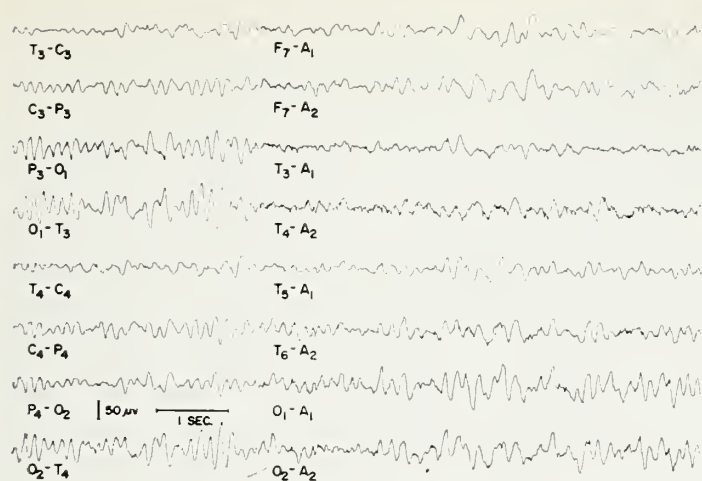


FIG. 2—EEG showing diffuse intermittent slowing compatible with seizure disorder.

upon him. Because of the findings, charges against him were dropped. It was felt that he needed longer institutionalization to observe his behavior, possibly while not taking tranquilizers, and he was transferred to Western State Hospital.

**DR. HAGOP S. AKISKAL:** This patient exemplifies several important issues which we psychiatrists take for granted and rarely pay serious attention to. First of all the brain is the organ of the mind and behavior. Whether abnormal behavior is elicited in response to an external stimulus or is the product of an intracerebral lesion, the final common pathway for that particular behavior has to involve neural substrates. Also, our treatment modalities work through their influence on the brain whether directly through drugs and neurosurgery or indirectly through psychotherapy. That it is more convenient on many occasions to utilize non-neural descriptions should not distract us from the fact that some patients would benefit maximally from somatic investigations.

The patient under consideration is, in a sense, lucky, since he exhibited signs pointing to an intracranial lesion, e.g., unconsciousness. However, it is not uncommon for patients to present without such signs and nevertheless have a neurological lesion as the basis for their behavioral aberration. Cases have been reported with “purely psychiatric” presentations, e.g., hypersexuality, depersonalization, aggressive outbursts, and hallucinations, that only years later exhibit classical signs of neurologic disease. Actually there is not a single symptom of schizophrenia—even those regarded as “pathognomonic”—that cannot be mimicked by brain disease. Therefore, this diagnosis should always be deferred until all possible causes

have been reasonably ruled out, e.g., pellagra, porphyria, brain tumors, temporal lobe epilepsy, alcoholic and drug-related psychoses, etc. At an operational level this means that schizophrenia is reduced to an exclusion diagnosis—which would be distasteful to all those who claim they know its central feature, be that formal thought disorder, blunting of affectivity or an “inefficient perceptual filter”. . .

Secondly, unless a patient is a direct threat to his own life or that of others, polypharmacy should be avoided. It seems to me that on an inpatient psychiatry ward it would have been perfectly feasible to start this patient on one drug at a time—in this case an antiepileptic medication. If he did not respond to one, then another or a combination could have been tried. Only refractory cases should be approached with antipsychotic medications. And in patients with an abnormal EEG thioridazine (Mellaril) would have been the drug of choice, since it has a negligible effect on the seizure threshold, while chlorpromazine (Thorazine) lowers it. There are three basic reasons why the minimum number of drugs compatible with optimum therapeutic benefit would be advisable: (a) the frequency of side effects would be minimized; (b) in case the patient develops pharmacologic tolerance to one agent, we will have several other agents in our armamentarium; (c) finally, should a serious side effect like agranulocytosis develop, we would discontinue only one drug—but were all the available drugs effective in a certain condition utilized, we would have found ourselves at a therapeutic impasse.

Concerning the psychological aspects of this case, it seems to me that the finding of an “organic lesion” in this patient led the psychiatry residents who treated him to neglect the psychosocial context in which his aggressive behavior manifested itself. Such neglect—while understandable on the part of neurologists—is unpardonable in our field. It is true that this man’s aggressive behavior was often manifested during the period of postictal confusion, yet at other times such confusion was minimal or not documented. It would have been profitable to study the interpersonal or sensory stimuli which impinged on his damaged neural apparatus and elicited aggressive responses. It has been demonstrated that certain forms of epileptic discharges either classical epilepsy or atypical seizures, can be triggered by certain environmental



stimuli. A knowledge of such factors can maximize our therapeutic effectiveness in such patients. The patients or their relatives should be advised that the patient must avoid exposure to these offending situations. That our search for such factors may be tedious should not discourage us. There are situations where drugs will fail and patients will require this type of management until appropriate neurosurgical intervention is instituted. Also, we should keep in mind that epileptics can utilize their illness in the service of psychodynamic needs, e.g., they may mimic seizures to obtain certain social rewards ("attention," the benefits of the "sick role"), or they may perform antisocial acts with the hope that the latter will be attributed to their illness.

DR. HUBBERT: This case is an example of the over-cited case of an erroneously diagnosed psychiatric patient dying of brain tumor in the back wards of a state hospital. Though organic, and certainly potentially treatable, psychiatric syndromes are missed, they are not as common as the public—and even nonpsychiatric physicians—are lead to believe. This is not to minimize the psychiatrist's duty to take careful histories and get adequate consultation when there is doubt about etiology, while at the same time treating the patient symptomatically. One could argue that it was the neurologist's obligation to have diagnosed this patient. However, too much reliance was paid to the patient's possibly inaccurate history together with the report of a normal EEG and spinal fluid as well as inadequate cooperation on followup. When the patient is required by virtue of his hostile, aggressive behavior to visit the psychiatrist (through the police department), then the psychiatrist has the opportunity to re-open the case. At this time he is able to see the patient at the apex of his psychopathology and gather further history of a recent fall which suggests head trauma, namely, a subdural hematoma. A review of his old record showing an Emergency Room visit after a seizure when a blood glucose of 47 mg% was found should alert the psychiatrist to the various etiologies of hypoglycemia which is an oft-neglected cause of acute behavioral aberrations in addition to seizures. Hypoglycemia after alcohol abuse is more common than recognized and should be thought of, but an insulin-producing tumor though rare would probably be

considered by many internists called in consultation. In the past the tolbutamide test using blood glucose levels was one of the best tests, for insulinoma, but in many places blood insulin levels are now available and more reliable.

With the building evidence of organic or structural brain disease (EEG now abnormal though not specific) the neurology consultant is ready for a contrast study after finding the CSF studies, including the VDRI normal. An unexpected arteriovenous malformation is found, and a brain tumor or subdural hematoma is ruled out. It is felt that the malformation is influencing the temporal lobe, probably as a mass, and causing his symptomatology, i.e., temporal lobe or psychomotor seizures with postictal psychotic behavior. A plausible etiology is now established. The management of the malformation, however, is considered to be beyond the scope of our present discussion.

But before leaving all of the reasoning for adequate, indepth evaluation of the assaultive, aggressive patient, or any other psychiatric syndrome for that matter, one should consider the legal implications of such behavior. This patient was charged with a serious offense, namely, assault with a deadly weapon. A charge of this severity of necessity warrants a thorough evaluation not only psychiatrically but neurologically to best answer the question of criminal responsibility. This question did not arise in this patient because charges were dropped after the details of this case were known by the authorities.

What about the management of this patient or any patient who is hostile, aggressive, assaultive, or homicidal regardless of etiology—organic or purely psychiatric? The psychiatrist is best equipped to handle these persons with his vast array of psychotropic drugs and expert knowledge of human behavior. The calming atmosphere of a psychiatric ward alone often is sufficient to improve such disturbed behavior. A major tranquilizer, chlorpromazine, was the principal agent used in this patient and probably would have been the choice of most. It has the advantage of being useable intramuscularly. Also, chlordiazepoxide is quite an effective drug in large doses for quieting the agitated patient on a rapid, short-term basis and might be preferable in the elderly, debilitated, or medically complicated patient. The use of Dilantin in this patient did not produce the prompt

improvement in his behavior even though his difficulty apparently was initiated by a seizure post-ictal state. He had not been on his anti-convulsants immediately prior to his outbursts, and in all likelihood his Dilantin levels were low or absent. The small dose of 300 mg the first day of hospitalization would have been ineffective in producing specific improvement in his behavior. One could even say he would have improved spontaneously without any therapy once over the post-ictal state. However, this possibility should not have influenced the use of psychotropic drugs as well as starting him on loading doses of Dilantin and phenobarbital. The use of antiparkinsonian drugs routinely with phenothiazines is widespread but probably should be discontinued except in some

elderly patients or those more susceptible to extrapyramidal signs. These drugs in themselves can and frequently do cause organic brain states and psychoses.

In summary, the psychiatrist is often the physician who is first consulted for a patient's change in behavior or personality. Since these changes are also the hallmarks of temporal lobe or psychomotor seizure disorders, whether primary, idiopathic, or secondarily symptomatic of other causes, he should be aware of these possibilities and seek appropriate consultation while giving emergency treatment to the patient in a manner for which he has been expertly trained. An example of such a case has been presented and several aspects of his case have been elaborated on.

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## **SAINT ALBANS PSYCHIATRIC HOSPITAL**

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# self-evaluation quiz

## THE COOPER QUIZ\*

(answers to be found beginning on p. 394)

*True or false except as indicated.*

1. Ambulatory patients with chronic alcoholism who had no symptoms or signs and no EKG or x-ray abnormalities indicating heart disease do have cardiac malfunction.
2. Mechanical ventilation may deplete the lung of surfactant, which is of serious consequence. With the possible exception of the premature infant, surfactant deficiency is the result, not a cause of alveolar damage.
3. In the USA infections with *Entameba histolytica* are primarily asymptomatic in the form of the intestinal carrier state.
4. There is evidence that L-dopa administration (long term) to patients with Parkinsonism results in an increase in the growth hormone in the plasma. Because of this fact these patients should be checked for the development of acromegaly.
5. Death from heatstroke is not uncommon. Approximately (30) (50) (65) (80) percent of these patients die from acute circulatory failure.
6. Restoration of body temperature to normal in heatstroke victims is as important as support of the cardiovascular system.
7. Patients with psoriasis, besides being influenced by heredity, also have an increase in HL-A13 antigens.
8. Cytomegalovirus (CMV) can be transmitted via semen.
9. Hypertension is the most important etiologic factor in congestive heart failure.
10. In a Cook County (Illinois) study of infantile diarrhea, 80 percent of the cases did not yield a specific pathogen.
11. The toxic effects of marihuana are related to the acute happenings at the time of its use. There appears to be no effects from chronic use per se.
12. Besides dogs and other canines, bats are the only animal that constitutes a threat in the infection of rabies.
13. In a Canadian study of patients receiving digitalis (5) (12) (23) (29) percent developed intoxication.
14. "Abdominal epilepsy" is, in reality, a nonentity.

\* We are indebted to William T. Snagg, M.D., Director of Medical Education, The Cooper Hospital, for permission to reprint portions of "The Cooper Quiz." Published monthly by the Dept. of Medical Education, The Cooper Hospital, Camden, N.J. 08103.

15. The "battered child" may be the result of a "battering child" rather than an adult.
16. One authority lists 7 basic contraindications for organ donation. Can you name 4 of them?
17. Of the drugs that cause a syndrome resembling systemic lupus, procainamide is probably the worst offender.
18. Hidradenitis suppurativa is basically an inflammatory reaction of the subcutaneous glands resulting in abscesses, draining sinuses and hypertrophic scar tissue.
19. In type IV hyperlipoproteinemia clofibrate given without dietary restriction resulted in lowering both the triglycerides and the cholesterol.
20. In a New York study with anticoagulation therapy for acute myocardial infarction (1) (men) (women) seemed to benefit more than (2) (men) (women).
21. A study of the treatment of acute pulmonary edema in an intensive care unit or on the regular hospital floors yielded only one bit of difference. The cost to the patient was higher in the unit but mortality rate was the same.
22. Pleural effusions are divided into "transudates" and "exudates." In the transudates the pleural surfaces are not thought to be involved in the primary pathologic process. The exudates are results from inflammation or other disease processes of the pleural surface.
23. The protein content of the effusion is an effective and accurate way to distinguish between transudates and the exudates.
24. If the pleural fluid is (transudate) (exudate) further diagnostic procedures are imperative to reach a definitive diagnosis and start specific therapy.
25. Mitochondrial antibody was detected in the serum of a high percentage (84) of patients with primary biliary cirrhosis but not in patients with acute or chronic *viral* hepatitis.
26. The test for mitochondrial antibody may not prove to be an accurate method of confirming the diagnosis of primary biliary cirrhosis because of the number conditions in which it is found.
27. Thyroid hormone treatment for myxedema has generally been unsatisfactory because of a high mortality rate.
28. Thiazide diuretics (raise) (lower) urinary calcium excretion.
29. Thiazide diuretics do not lead to hypercalcemia if the patients are given vitamin D.
30. The nephrotic syndrome with morphologic features of normal, or near-normal, glomeruli by light microscopy is well known; it is sometimes called "lipoid nephrosis," "idiopathic" or "minimal change" nephrotic syndrome. Most patients respond to steroid therapy with cessation of proteinuria.
31. Hydrochlorothiazide (50 mg bid per 25 days) will significantly (increase) (decrease) plasma calcium.
32. Quinidine can be hepatotoxic.



## The Use of Xenon Gas In Nuclear Medicine\*

### Part II

#### Cerebral Blood Flow Studies

In 1948, Kety and Schmidt<sup>1</sup> used the inert gas, nitrous oxide, to measure total cerebral blood flow. The method involved sampling blood from the arteries supplying the brain and from the veins draining the brain and utilized the concept of the partition coefficient (ratio of concentration of gas in tissue/concentration of gas in blood). In 1955, Lassen<sup>2</sup> utilized radioactive <sup>85</sup>Krypton to measure cerebral blood flow and in 1963, Glass and Harper<sup>3</sup> used radioactive <sup>133</sup>Xenon for the same purpose. The rationale for using a gamma emitting, inert, diffusible gas is that it can be measured externally, that it equilibrates between blood and brain in some known proportion (the partition coefficient), and that it washes out of the brain as blood that contains little or no xenon perfuses the brain, the rate of washout being a direct measure of the rate of blood flow. Recirculation of xenon was not considered significant since, in one passage through the lung, 90 to 95% of xenon in venous blood passes into alveolar air and is promptly exhaled. The validity of the method depends upon the accuracy with which the partition coefficient can be calculated, the accuracy with which the photopeak of <sup>133</sup>Xenon can be measured, the extent to which anatomic variables can be appreciated, and, of course, the overall reproducibility of the washout curves.

Partition coefficients for xenon present a particularly difficult problem. The distribution of xenon between blood and tissue is dependent upon hemoglobin levels.<sup>4</sup> Furthermore, it is significantly different in white matter and grey matter and is unknown for abnormal brain tissue.<sup>5</sup> With a hemoglobin of 8 grams%, the partition coefficient is 1.76 for white matter and .94 for grey matter, while, with a hemoglobin of 17 grams%, it is 1.44 for white matter and .77 for grey matter. If fat surrounds the

organ of interest (i.e. subcutaneous fat of the scalp), then the very high partition coefficient of 8 for fat<sup>4</sup> would lead to a significantly lower calculated value for blood flow through the organ if even a small amount of xenon perfused that fat.

The low gamma energy of the 81 KEV photopeak of <sup>133</sup>Xenon presents a very severe problem since Compton scatter in soft tissue is such that 55% of the activity detected by the probe may not come from the geometric area under the probe.<sup>6</sup> Although this may be reduced to 13% with maximal discrimination, it certainly would be higher when passing through dense tissue like the bones of the skull. Compton scatter may account for the absence of published reports of zero flow in areas of total infarction and is a serious limitation when trying to resolve fine anatomic detail. <sup>127</sup>Xenon might help in overcoming this problem of Compton scatter.

A number of anatomic factors also influence the accuracy and reproducibility of regional cerebral blood flow studies with xenon. At any hemoglobin level, the partition coefficient is based on an average ratio of grey to white matter of 60%. However, this ratio varies from 78% in the anterior temporal region to 34% in the posterior frontal region<sup>7</sup> and will result in an error in any calculation which is based on a single compartmental method of analysis.<sup>8</sup>

Since there are multiple arteries supplying brain, selection of a single internal carotid artery for a xenon injection may result in insufficient tracer material perfusing brain tissue that is supplied mainly by another artery. Then, even though washout may be rapid, total activity may be so low in the region of interest that statistical accuracy is compromised. In addition, even with a good injection via catheter into the internal carotid artery, enough isotope will get into the external carotid vessels so that the external carotid flow would constitute approximately 10% of the total cerebral blood flow.<sup>9</sup>

In severe chronic obstructive pulmonary disease a tenfold reduction in the rate of xenon clearance from the lung can lead to relatively elevated blood levels of xenon. This would lead to falsely low cerebral flow values because of

\* From the Department of Nuclear Medicine, Park View Hospital, Nashville, Tenn.



extracranial contamination and because of relatively high blood levels in the intracranial vessels.

While the diffusible tracer method is supposedly not affected by vascular flow, it is a fact that blood flow is elevated in the area of an arteriovenous malformation,<sup>10</sup> over the area of a carotid siphon,<sup>11</sup> or in the tissue peripheral to an infarction where one sees "luxury perfusion syndrome" or "red vein syndrome."<sup>12</sup> If this non-nutritional blood flow significantly affects blood flow calculations with diffusible tracers like <sup>133</sup>Xenon (as appears to be the case), it does not necessarily mean that the concepts are incorrect. Instead, it may mean that an agent with a higher partition coefficient or an isotope and detecting system with better resolution is needed.

There are three methods of analyzing radio-xenon clearance curves in brain; the stochastic height over area method, the initial two minute slope method, and the two slope compartmental method. Each method has its proponents and detractors. Some think that the stochastic method is too insensitive and gives values that are too low while others feel that the slope method of analysis provides a family of slopes and that it is almost a guessing game to determine which slope to use. In control patients, Paulson found that the interregional coefficient of variation was 8.5% for the stochastic method and 10.6% for the two minute initial slope method. Mathew et al<sup>9</sup> found that in ischemic patients it was 13% for the stochastic method and 24% for the two minute initial slope method. These values would be still worse if 30 or 40 small areas of brain were analyzed instead of only 6 to 10 larger areas. If one wishes to acquire data with enough accuracy and reproducibility to remain within the 95% confidence limit, then *all of these methods of analysis have an unacceptably wide range of values.*

If partition coefficients for xenon are too variable and generally too low for the production of reproducible accurate data,

If the Compton scatter from <sup>133</sup>Xenon is so high that data with poor accuracy is produced,

If anatomic variables such as focal intracerebral shunts, variations in distribution of grey and white matter, multiple arterial supply, chronic obstructive pulmonary disease, and a large amount of subcutaneous fat all contribute

to the production of inaccurate data,

And if all the methods of analysis of clearance curves result in data with poor reproducibility,

Then it is hard to see how even the most sophisticated computers could take all this poor data and produce reliable scientific interpretations.

*Finally, since the xenon cerebral blood flow methodology not only suffers from poor reproducibility but also is a traumatic and invasive method, it is patently clear that it is not a test that is suitable for routine clinical use.*

ROBERT L. BELL, M.D.  
Director

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### **The Role of the Division of Dental Health Services in a Public Preventive Dental Program**

**INTRODUCTION.** While man in this modern, civilized era has made great strides and advancements in the betterment of overall health, civilization has brought about the opposite effect on the health of the dentition. Probably this is caused partially by the composition and texture of the modern day diet. Also, while man seems to have learned the importance of personal cleanliness in relation to general health, he still has not been sufficiently motivated in the relationship of good oral hygiene to dental health.

**PROBLEM.** The dental diseases are some of mankind's most prevalent chronic diseases, and therefore present a major public health problem. In Tennessee the average first grader in a nonfluoridated community will have one decayed, missing or filled permanent tooth and five decayed, missing or filled primary teeth. By age 14 this same child can expect to have one-fourth of his teeth attacked by dental caries. Also, recent surveys in Tennessee have shown that 85.5% of the children aged 6-14 are affected with periodontal disease, while 86% are affected with dental caries. The National Health Survey found that between 1960 and 1962 approximately 75% of the adult population at risk had periodontal disease and 25% had destructive periodontal disease. About one-half of the school age population needs some kind of orthodontic treatment, and one out of five high school age children has a severe orthodontic problem.

In Tennessee, surveys have shown that about 6% of elementary school children ages 6-14 have one or more incisor teeth that have been fractured due to accidents.

Oral cancer is detected in 20,000 people each year, and 7,000 persons die yearly from oral cancer. One out of every 40 cancer deaths is due to oral cancer.

Cleft lip and palate make up 13% of all birth anomalies.

**PLAQUE CONTROL.** Many leading dental professionals portray plaque control programs as preventive dentistry.

Plaque control programs play a part in a broad preventive dentistry program, but they should be in proper perspective. The home care plaque control program's success depends on the continued involvement of the patient. The number who are able to follow such strict regimen is a small fraction of the total number of Americans needing dental care. A far more promising approach to plaque control is to intensify individual treatments on patients who are maximally susceptible to prevention. The likelihood of finding a single preventive mechanism which is epidemiologically universal is very slight, in spite of the fact that many seem to think that plaque control programs are just that.

As behavioral scientists report, a more realistic method of prevention would be to identify categories among the population which are susceptible to different approaches and then select treatments which are most likely to succeed because they closely match the patient's total need. Patients in this case can be either individual or community.

It is correct that plaque control answers a need not covered by fluoride, sealants, or other preventive programs, and has a place in individual practices and in public health programs.

**FLUORIDATION.** The most effective, efficient and well documented program for the prevention of dental caries is still community fluoridation. The present benefits of fluoridation for caries control probably exceed the maximum possible benefit of plaque control home care.

In the State of Tennessee 213 communities fluoridate their public water supplies, serving approximately 2½ million people.

The first community in Tennessee to fluoridate was Milan in 1951. To date every community in Tennessee of over 10,000 population, with the exception of one municipality, either has fluoridated or is in the process of fluoridating. Knoxville, the only major metropolitan area in our state without fluoridated water, approved fluoridation by referendum in November 1972, and is in the process of initiating this important health measure. Through the concerted efforts of both the private and public



sectors of dentistry in this state. Approximately two-thirds of all Tennesseans, excluding Knoxville drink fluoridated water, and approximately 80% of those on a public water system drink fluoridated water.

Several years ago it was determined that while we were making great strides in our fluoridation program in the larger communities, there was a lag in the small communities, or those under 10,000 population. When finances were determined to be the major barrier, Tennessee initiated the first program in the country to offer financial assistance to small communities to fluoridate. The State pays 50% of the initial cost of fluoridating the water supply of small communities, more than 40 of which have fluoridated with the assistance of State financing.

*WATER SURVEILLANCE.* Some time ago the Environmental Protection Agency surveyed a sampling of Tennessee's public water systems and found that less than half of them were fluoridating at the optimal level. As a result of this survey seminars have been conducted around the state to train water plant operators in better methods of surveillance of the fluoride content in their finished water. Further, six months ago the Division contracted with the National Institutes of Health to place a Sanitary Engineer on the staff to work full-time in the area of fluoridation. This is thought to be the only Dental Division in a State Department of Public Health in the country to have a full-time engineer on its staff. Additionally, funds were made available through this contract to provide 100% financial assistance to 10 small communities across the state to initiate fluoridation, in order to determine whether more small communities will initiate fluoridation if financial barriers are completely removed.

*SCHOOL FLUORIDATION.* Another new program which was begun as a result of the contract mentioned above was the addition of school fluoridators on 24 school water systems which are not on a fluoridated public water supply. This project is designed to see if school fluoridation achieves the same success in Tennessee as it has in North Carolina and other states. It has been found that dental caries can be reduced by one-third in those school-age children who drink fluoridated water in the concentration of 4 to 5 parts per million only during school hours.

It has been found in the Children's Dental Health Project conducted in Southeast Tennessee that the cost of providing dental treatment to children in fluoridated areas is 60% less than in non-fluoridated areas. This is of great importance when considering the expense involved in providing dental care in the Medicaid program or any other governmental program in the future.

*DENTAL HEALTH—EDUCATION AND RESEARCH.* In addition to community fluoridation, the Division of Dental Health Services provides topical fluoride programs to children in those areas that do not have the benefits of fluoridated water. In these areas self-applied fluoride programs are also conducted which include teaching good oral hygiene, providing a topical fluoride treatment, and giving children a toothbrush and the necessary materials to continue good oral hygiene at home.

Between 40,000 and 50,000 children are seen each year on these programs. Some plaque control programs are carried out in areas where there are teachers or others interested enough for success.

Another classical study conducted by the Dental Division in the early 50's determined the relationship between the frequency of eating between meals and caries experience. The study, which is still widely quoted in the scientific literature, demonstrated a direct and constant relationship between caries experience and the frequency of eating items of high sugar content or a high degree of adhesiveness between meals.

The Dental Division staff currently is conducting a study of the two most popular sealants available commercially to determine their role in a preventive program. Other studies have shown that the adhesive coverage of the sealants remained intact on 87% of the permanent tooth surfaces after 2 years, with a very low percent of treated permanent tooth surfaces becoming carious. This procedure appears very promising in the area of preventive dentistry.

Surveys conducted over the years have demonstrated that the public preventive programs of the Division of Dental Health Services regarding dental caries have been effective. The caries rates in school-age children (ages 6-14) have been reduced from a decayed, missing, filled permanent teeth rate of 4.6 to a DMFT rate of 2.7 over the past 15 to 20 years.



Many supervised toothbrushing programs have been initiated in school systems throughout the state. At a certain time during the day all students in the classroom go through a toothbrushing exercise using their own brushes, pastes, etc., that are kept permanently in the classroom. Thousands of children throughout the state are now participating in these supervised toothbrushing programs.

Early detection and early treatment are the answers for decreasing deaths from oral cancer. Oral exfoliative cytology has evolved as a potential aid in early detection of squamous cell carcinoma. The Dental Division a few years ago cooperated with the College of Dentistry at the University of Tennessee in conducting seminars across the state to instruct members of the dental profession in its use and to encourage them to be continually on the lookout for suspicious oral lesions which would hopefully lead to early diagnosis and treatment of oral cancer.

Since there is probably more misinformation in the field of dental health than any other health area, a public preventive program must include dental health education. The Dental Division, along with the L. G. Noel Memorial

Foundation and the Department of Education, has developed the *Dental Health Guide for Teachers of Tennessee*, which has been distributed to school systems throughout the state. The Guide has been used and copied throughout the United States and has been distributed internationally. The staff of the Dental Division works with teachers and other educational personnel to provide up-to-date factual information on dental health to all students.

**SUMMARY.** There are two ways of coping with the dental disease: corrective treatment and prevention. Prevention, which is the major thrust of the Dental Division, is more productive and less costly.

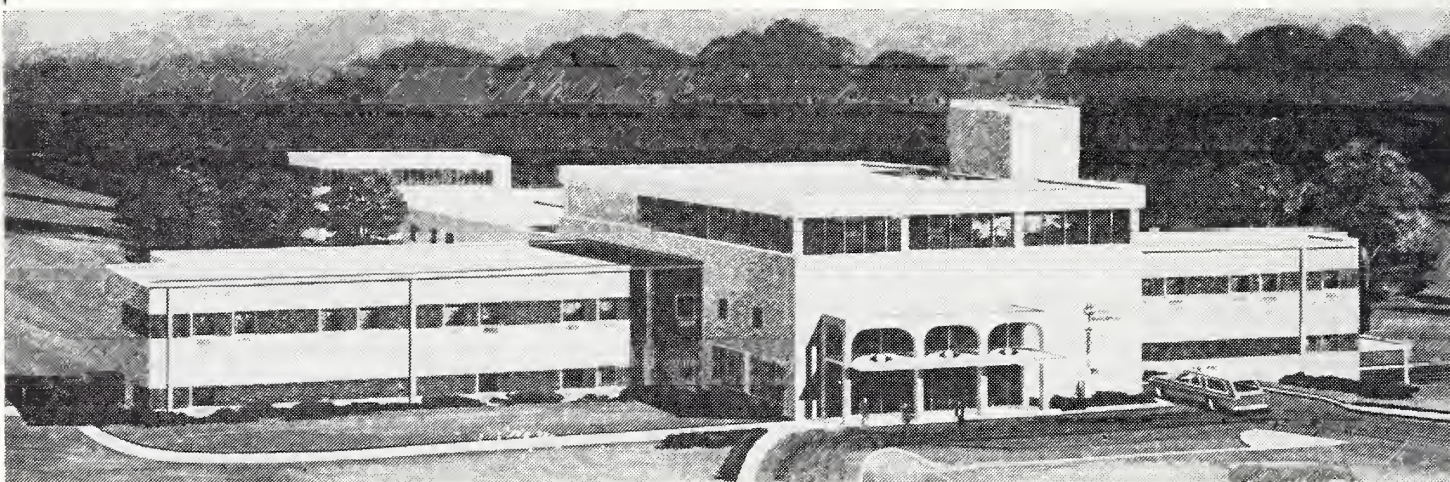
The purpose of dental public health programs in Tennessee is to maintain and improve the dental health of the people of the state by prevention of dental diseases by utilization of all the scientifically proven methods, education of people at all levels of our society, the provision of dental treatment to those unable to provide dental treatment for themselves, and conducting a limited number of demonstration and research projects.

DURWARD R. COLLIER, D.D.S., M.P.H

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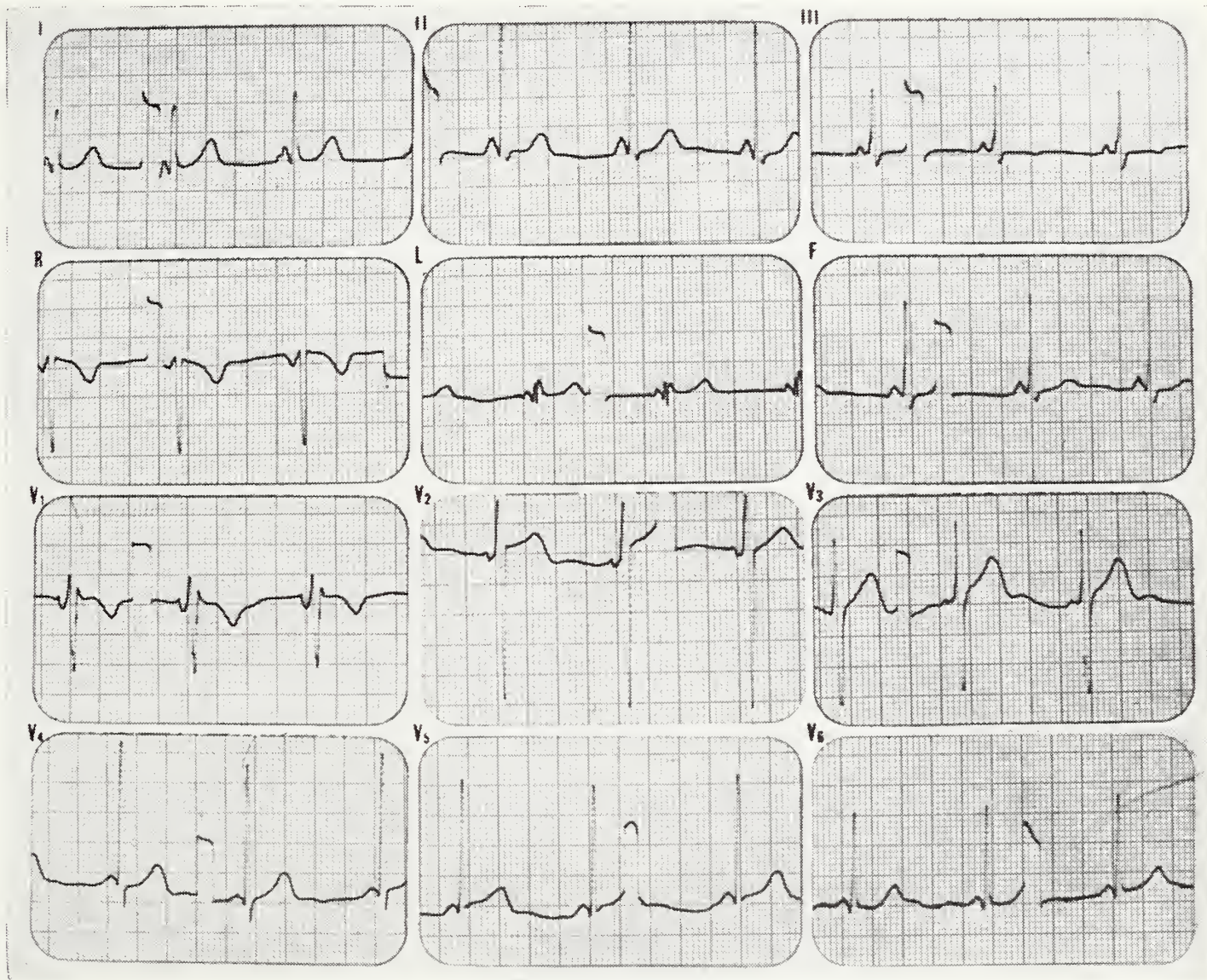


# TMA EKG of the month

## HISTORY

This 23 year old lady was hospitalized for evaluation of recurrent episodes of palpitation. Although no disturbance of heart rhythm had been documented electro-

cardiographically, her description of abrupt self limited episodes of rapid heart action seemed real. Her family physician was convinced of her emotional stability and requested consultation regarding a suspected organic basis for her complaints. Physical examination, chest x-ray and routine laboratory tests including PBI were normal. Her resting electrocardiogram is illustrated. Although cardiac rhythm is normal, a clue is afforded as to the likelihood and nature of a paroxysmal arrhythmia as the basis of her symptoms.



## DISCUSSION

The electrocardiogram is normal except for a shortened P-R interval of 0.08 sec. The normally expected P-R interval is 0.12-0.20 sec. This time interval represents normal delay of electrical conduction between the atria and ventricles through the atrioventricular (A-V) junction. An abnormally short P-R interval commonly represents accelerated AV conduction. Another situation which may result in abnormally short PR intervals is isorhythmic A-V

dissociation. A-V dissociation is unlikely in this tracing as no variation in P-R interval is noted throughout the tracing. (Repeat electrocardiograms in the patient showed no change.)

The various P-R interval and QRS patterns of accelerated AV conduction may be associated with specific anatomic anomalies of the conduction system. A short P-R interval with initial slurring of the QRS complex (Delta wave) may be ascribed to direct short circuits between the atria and ventricular myocardium by Kent bundles (small bridges of tissue across the fibrous A-V ring), and represents the

From the Department of Cardiology, St. Thomas Hospital, Nashville, Tenn.



familiar Wolff-Parkinson-White syndrome. A similar QRS pattern with normal P-R interval has been described and may be associated with fibers described by Mahaim which short circuit the bundle of His or proximal bundle branches with immediately adjacent ventricular myocardium.

The electrocardiogram above represents a third possibility, that of a short circuit from the atria into the conduction system below the AV junction without direct myocardial connections. Such a possibility exists in the occasionally observed histologic finding that fibers from the posterior intranodal pathway extend distally by passing the A-V node to connect directly with the His bundle. These fibers have been described in detail by Dr. T. N. James and not only represent a mechanism for a short P-R interval with normal intraventricular conduction, but also represent a potential pathway for re-entrant tachyarrhythmias.<sup>1</sup> The association

of short P-R interval, otherwise normal electrocardiogram and recurrent tachyarrhythmias were recognized in 1952 by Lown, Genong and Levine.<sup>2</sup> This young lady would appear to represent an example of this problem.

**FINAL EKG DIAGNOSIS:** Accelerated AV conduction of the "James fiber" type with associated paroxysmal tachyarrhythmias (Lown-Genong-Levine syndrome).

W. BARTON CAMPBELL, M.D.  
HARRY L. PAGE, JR., M.D.  
Co-Directors

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1. James, TN: Morphology of the Human AV Node with Remarks Pertinent to its Electrophysiology. *Amer Heart J*, 62:756, 1961.
2. Lown, B, Genong, WF, Levine, SA: The Syndrome of Short PR Interval, Normal QRS Complex and Paroxysmal Rapid Heart Action. *Circ*. 5: 693-706, 1952.

\* \* \*

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### **Australia Antigen and Post-Transfusion Hepatitis**

The clinical aspects of the complicated relationship of the "Australia antigen" (here referred to as HBAg, for "hepatitis B antigen") to viral hepatitis are gradually becoming clarified. This antigen may in fact be the viral agent of "serum" hepatitis; a virus of similar etiological significance to "infectious" hepatitis (hepatitis A) has to date not been identified. The clinical implications of exposure to HBAg may range from incidental discovery of the antigen in an entirely asymptomatic blood donor to fulminant and fatal hepatitis. Antigenemia may be transient, or persistent in a "carrier" state, the latter situation occurring with all gradations of liver disease from none to chronic hepatitis with cirrhosis.

The significance of HBAg relative to post-transfusion hepatitis (PTH) is still under investigation, and much has been learned. Overall, it has been estimated that 30,000 cases of transfusion-associated overt hepatitis (and perhaps 150,000 cases of subclinical hepatitis) occur annually in this country, resulting in 1500-3000 deaths. From information compiled before the current practice of excluding HBAg-positive units of blood from transfusion purposes, the risk of developing PTH from a unit of HBAg-positive blood is three to five times greater than from an HBAg-negative unit. Approximately 15-30% of recipients of a single unit of HBAg-positive blood may develop overt hepatitis. Similarly, a given blood donor may be implicated in disease transmission in only a few instances of PTH, though he may have donated multiple, presumably infective, units over a period of time. These facts suggest that a given unit of blood may be hazardous for some, but not all, recipients.

HBAg may be detected, depending on the test method, in about 1% of an overall donor population in the United States. However, the incidence of antigenemia may be from two to fifteen times higher in a paid donor population than in volunteer donors; accordingly, the incidence of PTH in recipients of blood from the former group compared to the latter is

several times higher (5.3% versus 1.5% in one recent large study). Factors implicated in the increased incidence of HBAg-positivity in paid donors are a generally lower socioeconomic status and a significant incidence of drug abuse. Other potential high-risk donor populations include health care personnel and previously transfused individuals. Interestingly, persons with a history of hepatitis may not be at any greater risk than those without such a history, although in practice they are generally eliminated as blood donors.

The presence of the antibody to HBAg (anti-HBAg) is indicative of previous exposure to the antigen, and, employing relatively insensitive laboratory techniques, may be detected in about 0.1% of blood donors. The incidence is much higher in multiply-transfused recipients (hemophiliac plasma is the commercial source of this antibody). Although in current practice it is generally excluded from use in transfusion, blood containing this antibody may not in fact be any more likely to transmit hepatitis than blood containing neither HBAg nor anti-HBAg.

Statistics emerging from various studies indicate that donor screening and elimination of all HBAg-positive units may significantly decrease the incidence of PTH. Whereas the relatively insensitive agar-gel diffusion method will detect roughly 30% of HBAg carriers, more sensitive techniques (e.g., complement fixation) may double this figure. The use of radioimmunoassay, which will be widely employed in the future, and hemagglutination-inhibition, although ten times more sensitive than complement fixation, may increase the detection rate by only a relatively small percentage.

The problem that remains is that there is still a substantial percentage of cases of PTH that, at the present time, cannot be predicted or prevented. It is estimated that roughly 65% of PTH may be due to hepatitis B; of this figure, greater than half may be prevented by elimination of all HBAg-positive donor units. This still leaves the 35% of cases unrelated to hepatitis B, plus the inevitable percentage of HBAg carriers with antigen levels too low for detection



but still infectious. The judicious use of blood and blood components, restricted to those obtained from low-risk, HBsAg-negative carefully screened volunteer donors, is the best policy that can be employed in the light of our current

understanding of this intriguing problem.

DEAN G. TAYLOR, M.D.  
Laboratory Service, Methodist Hospital  
Memphis, Tenn. 38104

\* \* \*

### Pillars of Economic Wisdom

Just imagine what kind of economy we could enjoy if we lived according to these principles:

1. Nothing in our material world can come from nowhere or go nowhere, nor can it be free. Everything in our economic life has a source, a destination and a cost that must be paid.

2. Government is never a source of goods. Everything produced is produced by the people, and everything that government gives to the people, it must first take from the people.

3. The only valuable money that government has to spend is that money taxed or borrowed out of the people's earnings. When government decides to spend more than it has thus received, that extra unearned money is created out of thin air, through the banks, and, when spent, takes on value only by reducing the value of all money, savings and insurance.

4. In our modern exchange economy, all payroll and employment come from customers, and the only worthwhile job security is customer security. If there are no customers, there can be no payroll and no jobs.

5. Customer security can be achieved by the worker only when he cooperates with management in doing the things that win and hold

customers. Job security, therefore, is a partnership problem that can be solved only in a spirit of understanding and cooperation.

6. Because wages are the principal cost of everything, widespread wage increases, without corresponding increases in production, simply increase the cost of everybody's living.

7. The greatest good for the greatest number means, in its material sense, the greatest goods for the greatest number which, in turn, means the greatest productivity per worker.

8. All productivity is based on three factors: a) natural resources, whose form, place and condition are changed by the expenditure of b) human energy (both muscular and mental), with the aid of c) tools.

9. Tools are the only one of these three factors that man can increase without limit, and tools come into being in a free society only when there is a reward for the temporary self-denial that people must practice in order to channel part of their earnings away from purchases that produce immediate comfort and pleasure, and into new tools of production. Proper payment for the use of tools is essential to their creation.

—Reprinted from *Bulletin of Atlanta Envelope Co.*, Nashville, Tenn.

\* \* \*

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**J. E. BALLENTINE**

# **MEDICAL DIGEST**

**NEWS OF INTEREST TO DOCTORS IN TENNESSEE**

**TMA AT WORK . . .** Again, January through March was one of the busiest periods for TMA committees, boards and councils . . . January meetings included a two-day session of the Board of Trustees; a lengthy one-day meeting of the Committee on Continuing Medical Education; a meeting of the Regional Medical Program Committee, and a one-half day meeting of the Liaison Committee to Medical Schools . . . In February, a one-day Legislative Conference was sponsored and over 125 physicians throughout the state attended. The Conference was mainly for contact doctors and pertained to the TMA legislative program at the state and national level . . . In addition, committee meetings included the Committee on Mental Health; Committee on Communications and Public Service; Ad Hoc Committee on Abortions, and the TMA-Tennessee Hospital Association Liaison Committee . . . In March, a second important meeting of the Abortion Committee was held, and a meeting of the Committee on Continuing Medical Education.

\* \* \*

**TMA GAINED A NET OF 91 NEW MEMBERS IN 1972 . . .** An increase of 91 net members was realized during 1972, pushing the total membership of TMA to 3,595. Of this number, 3,199 were also members of the AMA. This represents 89% of TMA's membership.

\* \* \*

**AMA LEADERSHIP IN PSRO . . .** AMA's House of Delegates vowed the national organization would "provide a dominant role of leadership in the implementation of the PSRO program to assure that the best interest of the public and the profession are preserved," at their 26th Clinical Convention in November, 1972 in Cincinnati . . . The policy-making body created an Advisory Committee on Professional Standards Review Organizations . . . The PSRO Advisory Committee will function to assure input from the medical profession in the development of rules and regulations for PSRO's by the U.S. Department of HEW; assist state and county societies in PSRO development; and attempt to evaluate the effect of PSRO experiments on the quality of medical care.

\* \* \*

**AMA'S MEDICREDIT PLAN . . .** The Medigredit Plan, a National Health Insurance proposal that would provide Federal income tax credits to help finance the purchase of private health insurance, had 130 sponsors in Congress within a week after it was introduced . . . The Senate number of the bill is S. 444. The House number is H.R. 2222. New features of this year's bill are coverage of home health care services, dental care for children, and emergency dental services for all. Coverage against catastrophic illness would be financed by the government for all citizens.

\* \* \*



**OCCUPATIONAL SAFETY AND HEALTH ACT . . .** The Tennessee Department of Labor has announced that effective January 1, 1973 an employer who had no more than seven employees at any one time during the calendar year 1972, will not have to comply with record and reporting requirements. It was explained that all employers are still required to report any employment accident which results in either a fatality or hospitalization of five or more employees. The report may be oral or written and must be made to the State Commissioner of Labor and the area director within forty-eight hours after the occurrence of such action. It was stated that the exemption pertains only to record keeping. All employers with one or more employees must comply with Federal safety and health standards and are still subject to safety and health inspections. The Tennessee Occupational Safety and Health Act applies to all employers with one or more employees.

\* \* \*

**MEDICAL DIRECTORY . . .** All U.S. physicians will receive an AMA questionnaire concerning professional activities. Information from the questionnaires will be used in the publication of the 1973 edition of the AMA's American Medical Directory.

\* \* \*

**PHYSICIAN ASSISTANTS . . .** National certification of Physician's Assistants by uniform examination is goal of a program launched by the National Board of Medical Examiners and the American Medical Association. AMA House of Delegates has approved the AMA Council on Health Manpower collaboration with the National Board of Examiners in developing a certification examination.

\* \* \*

**THE CASE FOR AMERICAN MEDICINE . . .** One of the outstanding speakers at the TMA Annual Meeting is the author of the new book "The Case for American Medicine: A Realistic Look at Our Health Care System." It is must reading for every physician and every serious student of health care. Author, Harry Schwartz, distinguished editorial writer for the New York Times, exposes scare tactics of opponents of the present system, shows Americans are getting more and better care than ever before, identifies needed improvements and how best to accomplish them, relates patients' complaints against socialized systems in Britain, Sweden and Russia, and illustrates how a U.S. government control system would provide less care at greater cost. The publisher is David McKay Company, 750 Third Avenue, New York, New York 10017.

\* \* \*

**DID YOU KNOW . . .** HEW reports that 2,300,000 persons each day see a physician. The nearest physician is only seventeen minutes from the average home, and 20,000,000 house calls were made in 1969, more than half of which were to families with annual income under \$3,000, the elderly or the handicapped . . . The AMA will publish and circulate a new monthly magazine, PRISM, to deal with the socio-economic questions of health care and medicine . . . More than our fair share might be the reactions of the medical profession to the first week of Congress. Of the more than 2,350 pieces of legislation entered, 375 pertain to health care . . . One of the best ever Annual Meetings of TMA was just concluded with the 1973 meeting in Memphis. Complete details of the actions of the House of Delegates, and a resume of resolutions, amendments, reports and elections, will appear in the June issue of the Journal.



**public  
service**



## **COMMUNICATIONS • LEGISLATION**

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**SURVEY CONFIRMS TMA POSITION ON MD TRAINING.** . . . A recent survey in East Tennessee shows a large percentage of young physicians establish their private practice in an area where they complete their medical training. The University of Tennessee Memorial Research Hospital in Knoxville trained 52 physicians (35 residents and 17 interns) during the survey period of 1970-72. A total of 38 of those trained are now in private practice, 81.5 percent of them in East Tennessee. Twelve of the 52 entered military service and two others are receiving additional training. Dr. Joseph E. Johnson, UT Vice-President for Health Affairs, noted that 31 of the 38 physicians entered private practice within the State and most of them within 100 miles of the UT Hospital where they completed their medical training. Fourteen of the MDs remained in Knoxville, two established their practice in Crossville and Kingsport and one each in Harrogate, Morristown, New Tazewell, Halls Cross Roads, Maynardville, Chattanooga, White Pine, Oak Ridge and Newport. Four others settled in Middle Tennessee--two in Columbia and one each in Dickson and Smithville. The new Clinical Education Center, which began operating as part of the UT Hospital, is expected to increase the number of physicians locating in East Tennessee. Establishment of these training centers, which are designed to provide the final year of pre-intern training for some of the medical students at UT in Memphis, is in keeping with the Tennessee Higher Education Commission's recommendation which was endorsed by TMA. Similar centers are planned for the Tri-Cities area as well as Chattanooga.

\* \* \*

**MEDICREDIT LEGISLATION NOW BEFORE CONGRESS** . . . The American Medical Association's national health insurance proposal, Medigredit, has been reintroduced into Congress by Clifford P. Hansen (R-Wyo) and Vance Hartke (D-Ind) as S.444 in the Senate, and by Richard Fulton (D-Tenn) and Joel T. Broyhill (R-Va) as H.R. 2222 in the House of Representatives. The bill had 126 sponsors almost immediately upon introduction, and many more are anticipated as the session progresses. New additions to the bill this year are basic benefit coverage of home health services, dental care for children, and emergency dental services for all. Coverage under the program would be provided through private



health insurance, including prepaid groups. Government would underwrite the full cost for low-income families and 10 to 99 percent of the cost for others, according to need. Among Medicredit's other provisions are:

- Basic benefits covering emergency and preventive care, physical examinations, well-baby care, inoculations, X-ray and lab work for both in- and outpatients; 60 days of hospitalization or 120 days in an extended-care facility, during one year.
- Catastrophic protection covering expenses beyond basic coverage, including hospital, extended-care facility, inpatient drugs, blood, prosthetic appliances and other specified services.
- Annual \$50 deductible per person for hospital stay; 20-percent coinsurance on medical services, emergency or outpatient expenses and dental services.
- Unlimited psychiatric coverage.

\* \* \*

**WASHINGTON LEGISLATIVE NOTES** . . . AMA's Medicredit bill, medicine's national health insurance proposal, has more sponsors in Congress than all other NIH proposals combined. Included as sponsors are all eight Tennessee Congressmen plus Senator Howard Baker. . . . AMA's Medicredit bill is the only national health insurance proposal, due to the tax credit approach, which would not be subject to Presidential impoundment. . . . Senator Edward Kennedy's HMO legislation has been approved by the Senate Health Subcommittee and is expected to reach the Senate floor at any time. The bill calls for establishment of HMO's costing \$5 billion over the next three years. The Senate adopted a similar Kennedy measure last session by a vote of 60-14. The Administration has indicated opposition along with AMA and others. . . . Because of the Administration's attempt to cut back and/or eliminate many health programs, new HEW Commissioner Caspar Weinberger has been nicknamed "Cap the Knife" by some Washington wags. . . . Undersecretary of HEW, Frank Carlucci, has announced that the three main HEW goals for this year with regard to Professional Standards Review Organizations are (1) area designations; (2) writing of the regulations, which aren't expected to be completed before October, and (3) appointment of the eleven-member National PSRO Council. . . . The Senate Finance Committee is expected to form six new subcommittees including one on Health. Senator Russell Long (D-La) chairman of the Senate Finance Committee, is expected to name Senator Herman Talmadge (D-Ga) as head of the Health panel. Some luster could be removed from Senator Kennedy's subcommittee as a result. . . .



WM. T. SATTERFIELD

## *A Short Eventful Year*

As my tour of duty as President of the Tennessee Medical Association draws to a close, this is occasion for reflections. The honor of serving in this capacity is greatly appreciated. It is regrettable that the ball bounces to so few of the many qualified to serve in the position, as the experiences are enjoyable and unforgettable.

### **president's page**

The position offers an education in matters medical. Meetings—local and national, volumes of printed matter to be read, and associations with professional and lay leaders, contribute to a wealth of knowledge in all aspects of things affecting medicine. There are varieties of acceptability, from the cordial reception given when a guest at neighboring states' medical meetings, to the cool, "hate-all-doctors" chill of consumer and labor health conferences.

The most impressionable impact of the position, however, is the full realization of the unselfish efforts of colleagues in the Association serving on committees and as officers. Many valuable man hours are contributed for the betterment of medicine and the elevation of care of patients in our State. The dedication of TMA members and pride in our executive staff adds to the appreciation of the honor of being your 84th President.

My successor, Dr. Morse Kochtitzky, has served TMA for many years and will be one of your best Presidents. He is knowledgeable in medical affairs and experienced in legislative activities. I welcome him to the Presidency and am sure he will lead you well in a very important year.

Thank you for the honor of representing you.

Sincerely,

*William T. Satterfield*

President



# THE NEW PRESIDENT



MORSE KOCHTITZKY, M.D.  
NASHVILLE



# MORSE KOCHTITZKY, M.D.

*85th President—Tennessee Medical Association*

AS AN ACTIVE LEADER in the Tennessee Medical Association for the past twenty years, the new President has always searched for a better way to accomplish Medicine's goals. He is a physician with dedication and determination to give of himself to lead in solving some of the complicated problems that face Medicine.

Dr. Kochtitzky was born in St. Louis on December 22, 1920. His early life was spent in Blytheville, Arkansas, and Columbus, Mississippi, where he received his early education. He attended the University of the South at Sewanee, with time out for service in the United States Air Force during World War II, where he served as a navigator and radar operator with the rank of Second Lieutenant.

Following military service, Dr. Kochtitzky returned to the University of the South, after which he entered Vanderbilt University Medical School, where he received the MD Degree in June, 1950. Internship and residency in Medicine was served at St. Thomas Hospital in Nashville. In 1954, he joined with Drs. Thomas Frist and Addison Scoville in the practice of internal medicine at Nashville. A short training course in hematology was completed in the Jefferson-Hillman Hospital at Birmingham, Alabama.

Dr. Kochtitzky has served his state medical association in numerous capacities. These include Secretary-Treasurer and member of the Board of Trustees; Chairman of TMA's Legislative Committee for five years; a legislative contact doctor; Chairman of the Finance Committee of the Board of Trustees; past Chairman of the Communications and Public Service Committee; member of the Medical Licensure, and Governmental Medical Services Committees. Other service includes three terms (nine years) on the Tennessee Public Health Council where he was elected Secretary of the Council. He has been active in the Middle Tennessee Heart Association, serving as President and Chairman of the Board. His other activities include membership on the Board of Trustees and Chairman of the National Development Campaign of the University of the South, where he received an honorary doctoral degree. He also served the University's alumni association as a national officer and president of the Nashville Chapter.

Dr. Kochtitzky has held the position of Chairman of the Park View Hospital, and former Chief of Medicine at Baptist Hospital in Nashville. He and his family are members of St. George's Episcopal Church, and he is Senior Warden and member of the Vestry. He is married to the former Miss Marjorie Stevenson of Columbus, Mississippi, and they reside on Hampton Avenue in Nashville. They have two children, a daughter, Catherine (Mrs. Peter) Simpson of Batavia, Illinois, and son, Rodney, a sophomore at the University of the South.

The problems and pressures of Medicine today impose severe demands on medical association leaders. TMA's Presidents must be dedicated to the responsibilities of their office. The Tennessee Medical Association continues in its good fortune to have a new President that ably provides these qualifications.



# journal

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APRIL, 1973

# editorials

## EASTER 1973

Much of Western civilization's greatest art is centered around the Passion of Our Lord, yet it does little actually to make real for us the horrors of the Roman execution and prior torture which he endured. In the first place, the artists have been generally ignorant of the details, and they also have sought to remain in the realm of the aesthetically pleasing—an impossible task, for there is no way to paint an aesthetically pleasing portrait and at the same time show the extent of his brutalization. The gospel accounts themselves are sparing of words, possibly because those living in the early days of the church had the picture in the flesh daily before their eyes.

The sequence of events on that Friday nearly 2000 years ago has intrigued not only the faithful, to whom it has great spiritual significance, and artists, who have found it a source of

inspiration, but also physicians and historians, medical and otherwise, on purely secular grounds. Why, for example, did Jesus' death occur in a few hours, when it frequently took as much as 2 days? And what caused death, anyway? Roman procedural and combat manuals have answered many of our questions.

We must remember, first, that Jesus received extensive punishment before his crucifixion. He had been up all night, bound with thongs and possibly struck with staves, and had faced a grueling cross-examination. The words used in translating the gospel account fail to convey the true nature of his ordeal. The Roman soldier was a highly trained, efficient fighting machine. Duty in Palestine was not very highly regarded, and was probably boring, so that any exercise in brutality was a welcome relief. Where the gospels say simply that they "smote" him, we can picture bone crushing blows to the face. The crown of thorns was doubtless made of the limber boughs of a native Palestinian thorn tree, the thorns of which have a reverse curve, so that any attempt to remove it or change its position would extensively lacerate the flesh. The soldiers were using Jesus as a foil for their boredom. We can be sure that when the account says they "struck him over the head with a reed," it was no love tap.

Scourging, a customary prelude to crucifixion, was carried out in order to weaken the prisoner and hurry his death, and was delivered with a multi-thonged whip into which were knotted bits of stone, iron, bone and glass. In the hands of a skilled executioner it was capable of literally stripping the flesh from the back. Though occasionally eyes and other areas were damaged, it was considered a lack of expertise to apply the lash to areas other than the back, and there is no evidence in scripture that in this case it was done in other than expert fashion.

We see then a completely exhausted Jesus, with a flayed back, massive scalp lacerations and contusions, probably also with multiple facial lacerations and fractures of the facial bones, being forced to bear his cross through the streets of Jerusalem to the place of his execution. It was customary, under Roman law, to use the Tau cross, only the cross-beam, weighing about 150 pounds, being carried, or rather dragged, by the prisoner. This was placed atop the permanently fixed stake. We may, however, deduce from the fact that a superscrip-

tion was nailed to the cross above his head that Jesus was nailed to the less commonly used type of cross which we associate with his crucifixion. The weight of the cross on his bleeding shoulders proved to be too much for him, weakened by shock and loss of blood, so that a bystander was impressed to bear it. We may assume that as he crumpled under the cross, he sustained further injury from its weight.

Crucifixion was called by Cicero the most cruel and brutal form of execution imaginable, and yet it was designed not as a form of torture but as an efficient means of execution. No Roman citizen could be crucified; this form of execution was devised as an expedient to keep the conquered districts in line. It was a form of execution unknown to the Jews. It was done in a uniform way, according to a manual.

The cross was usually low, being 6 feet 8 inches in height, to facilitate terminal activities and removal of the body. The prisoner was seated on a *cornu*, or small saddle. The feet were nailed in place one over the other, with the knees flexed. The arms were maximally extended above the head at approximately a 45° angle, so that the saddle barely bore the prisoner's weight, and nailed to the cross-beam. The nail usually passed through the wrist, and though we are told in the gospel account of Jesus' "nail-scarred hands," the account of the crucifixion says simply that he was nailed to the cross. Again, the writers apparently assumed a prior knowledge of the details on the part of the reader. This has been objected to on grounds that the palms could not have borne the weight of the body. The purpose of the nails, however was only to keep the arms in position. Weight was borne by the saddle, otherwise death would have occurred in a few minutes.

When the arms are extended above the head in fixed position, so that no movement of the thorax is possible, blood pools in the lower part of the body, the blood pressure drops, and fainting may occur. The painful tug on the hands served to revive the victim. If not soon relieved, death might supervene from heart failure. In addition, respiration in this position is virtually impossible, the muscles of respiration soon become paralyzed, and death might occur from suffocation. Both of these situations could be temporarily relieved by extending the lower

extremities on the fulcrum of the nailed feet to bring the arms to a more or less horizontal position. In this manner, death could be forestalled indefinitely, subject only to the stamina of the prisoner and to the tender mercies of the guard, who had the power to end the torture by the simple expedient of breaking the legs with a club. Shock, suffocation, and heart failure rapidly ensued.

The final event, to ensure death before releasing the body to relatives, was a thrust to the heart with a short lance, in the use of which the Roman soldier was extremely skilled. Because the cross was low, a normal combat maneuver could be used to inflict a wound about 5 feet off the ground, in which the lance pierced the fifth interspace just to the right of the sternum (which in combat was at the edge of the opponent's shield), tearing the right atrium, at the same time releasing the fluid which had accumulated in the pericardial and pleural spaces from shock and heart failure.

"But when they came to Jesus and saw that he was already dead, they did not break his legs. But one of the soldiers pierced his side with a spear, and at once there came out blood and water. He who saw it has borne witness that you also may believe. For these things took place that the scripture might be fulfilled, 'not a bone of him shall be broken.'"

We look at Easter past the cross to the empty tomb, but we overlook the cross at our peril, because it says something to us as physicians, regardless of our beliefs. The world's watchword today is "rights—mine!" The lesson of God's Son on the cross is mostly ignored. We entered of our own volition, with our eyes open, a life dedicated to service. "I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients. . . . With purity and holiness [set apart for a special purpose] I will pass my life and practice my Art." Remember? It does not behoove any of us in our houses of glass to throw stones, but simply to look at ourselves, and on this Easter, to remember.

J.B.T.

### "THEY" IS "US"

Whenever I hear, as I too often do (*ever* is too often) a doctor say "I don't belong to AMA because I don't like what *they* do." I say, "You have no right to an opinion, friend,



unless you belong. *Then* you can complain, if you are trying to change it."

This issue of the JOURNAL carries a paper entitled "The Role of the County Medical Society." It is short and to the point. The reasoning of those who do not belong to their county society, and indeed to TMA and AMA as well, escapes me. I do not subscribe to everything any of them say, but I should not expect to. I did not let a few disagreements keep me from marriage, and my wife and I are still together after nearly 30 years of not infrequent disagreements. Why should I expect more from my medical society?

The medical news is filled these days with reports of physicians' unions. These are being formed largely by people who have given up on organized medicine (I wonder if they ever tried it), but who recognize that in union there is strength. I wonder how closely they have looked at the legal requirements for unions. I refer you to the excellent and comprehensive report in the *California Medical Association News*, Aug. 18, 1972, reprinted in *The Delaware Medical Journal* for Feb. 1973, page 44; entitled "Special Report on Physicians Unions," to which I am indebted for the information on unions given below.

Unions are clearly defined by law, and operate within a very narrow framework. In order to belong to a union, one must be an employee. Unions are allowed to bargain for advantages, which *by law* when engaged in by anyone else, including the self-employed, is called price fixing, which is illegal, and falls under the Sherman Anti-trust Act. It has been made clear that any physicians' organization would fall in this category.

The union speaks for its members, makes choices of policies which vitally affect him, and negotiates contracts which bind him. The union is, in short, the worker's industrial government. The courts have made it quite clear that members are committed to abide by union policies, whether they agree or not. Is *this* what you would like? It would be out of the frying pan into the fire.

With whom would the physicians' union bargain? There is no real counterpart to labor's employer, and to bargain with the government would only lead to further government inroads into the medical care field. Against whom would the unions strike? Against patients? The

resort to striking is clearly in conflict with basic professional concepts.

In 1970, California Medical Association's House of Delegates stated that "physicians have one major responsibility and duty: The provision of medical care of the highest quality to all persons. . . . Unionizing the medical profession would bring with it, in addition to a great many other disadvantages, the important deterrant that we would forever forfeit our professional status and jeopardize the dignity of our profession."

So much for unions. What then is the answer? Strong medical societies. They cannot, by law, act like unions, i.e., they cannot bargain economically or strike or boycott. But they do, if we are united, hold a trump card, thusly summed up by a wag, "If they fire us, who have they got?" We can unite, and make our views felt in legislative bodies. This is done through strong medical societies.

Are you disgruntled, depressed, pessimistic? Don't just sit there. Do something—not just anything, but get active in your society. They have a job waiting for *you*.

J.B.T.

## BLOOD

You are urged to read and attend to the article on page 334 entitled "Red Cell (Packed Cell) Transfusions: An Appeal to Reason." It tells why you should use packed cells rather than whole blood, and why whole blood is indeed seldom necessary, even when sizable quantities of whole blood are lost. The author points out that there are in fact times when whole blood is contraindicated, and its use could become grounds for malpractice litigation. In light of this, should not the routine order for "blood" be understood as "packed red cells," so that to give whole blood would require a special order? Some of us who automatically say to the nurse "whole blood" when packed cells would suffice would need to re-educate ourselves—or perhaps educate ourselves not to react negatively should the nurse ask in response, "Doctor, do you mean packed cells?" Do you, Doctor?

J.B.T.

## MORE DRUGS AND SUCH

We have had a good deal to say in these columns over the past year about prescription



drugs, package inserts, ant substitution laws, the FDA's relationship to all of this, and the like. Reprinted as a special item on page 382 of this issue of the JOURNAL is a statement by James R. Goddard, M.D., chairman of the board of Ormont Drug and Chemical Co., and former Commissioner of the FDA, who makes some very penetrating statements about the issues surrounding the "unapproved" use of drugs, and proposes some answers to the problem.

I realize that even to use the terms "approved" or "unapproved" uses of drugs waves a red flag in the face of practitioners of medicine, and so you may get turned off so early in his statement that you won't read it. I urge you to hear him through, because whether we like it or not, the *courts* are saying that there are unapproved uses, and they tend to go by the package insert, lacking better criteria. We know who writes them, and why.

Dr. Goddard correctly states that only physicians engaged in the clinical practice of medicine have the expertise necessary to decide what are proper uses for drugs, taking everything into consideration. It is unfortunate that the AMA chose this particular time to disband its Council on Drugs, whether or not the charge of bowing to political pressure has any foundation. Surely the expense of the Council was not excessive considering its necessity. Dr. Goddard proposes a panel of experts to define accepted uses and to advise FDA, who would be given powers which, though broader, would have a much firmer base.

We (you) had better come to some decisions on this matter, and make them known. There are some very unpalatable alternatives. Be very sure that the public and the federal government are going to insist that drug use be regulated. The courts have already spoken. Medicine—that's you, doctors—had better speak with a more unified voice than has been customary in the past.

J.B.T.



BARKER, HAROLD G., Humboldt, died March 1, 1973, age 61. Graduate of University of Tennessee School of Medicine, 1934. Member of Consolidated Medical Assembly of West Tennessee.

SHELTON, WILLIAM G., Dyersburg, died February 28, 1973, age 81. Graduate of Memphis Hospital Medical College, 1913. Member of Northwest Academy of Medicine.

VALENTINE, FRED M., SR., Newport, died February 27, 1973, age 70. Graduate of University of Tennessee School of Medicine, 1926. Member of Cocke County Medical Society.

## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### BLOUNT COUNTY MEDICAL SOCIETY

Paul W. Hoffmann, M.D., Maryville  
Ronald A. Moss, M.D., Maryville

### COCKE COUNTY MEDICAL SOCIETY

A. J. Garbarino, M.D., Newport

### CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Delza Penaranda, M.D., Milan

### McMINN COUNTY MEDICAL SOCIETY

George Ackaouy, M.D., Athens

### MONROE COUNTY MEDICAL SOCIETY

James Lester Allen, M.D., Sweetwater

### NASHVILLE ACADEMY OF MEDICINE

Erol Genca, M.D., Nashville  
Marvin G. Gregory, M.D., Nashville  
Philip J. Noel, Jr., M.D., Nashville  
William O. T. Smith, M.D., Madison

### SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Leo J. Davis, M.D., Kingsport  
Ricardo D. Sambat, M.D., Kingsport

## programs and news of medical societies

### Knoxville Academy of Medicine

The February 13 meeting featured Dr. Luther L. Terry, former Surgeon General of the U.S. Public Health Service speaking on "Smoking and Health: Where Are We Now and Where Are We Going." Dr. Terry was selected to present the second annual James L. Southworth Memorial Lecture.

The March 13 meeting of the Academy was devoted to scientific programs in pathology, anesthesiology, surgery, ophthalmology, and radiology.

### Nashville Academy of Medicine

The Legislative Committee hosted a dinner meeting for state Senate and House members for the Nashville area in February at the University Club.



# Medicine's men on the Hill.

Just who are they? They're the AMA's permanent representatives to Congress and a part of the AMA's Washington staff.

In the 92nd Congress, about 10% of all legislation introduced was health related—more than 2,500 bills. The AMA's representatives serve as the eyes, ears and voice for our profession on such legislation. Keeping in close contact with members of Congress and their staffs. Explaining and promoting our profession's views. Reporting on legislation. And providing legislators with resource material and information on medical and health subjects.

They're on the Hill to protect your interests,

lobbying to retain the basic principles of private practice in any government health program that might be enacted. Equally important, they lobby to insure the passage of constructive and workable health legislation for the public.

Sure, the AMA lobbies. We lobby for the rights and interests of our profession and for quality medical care for every American. By adding your voice, your support, we can be even more effective.

**Join us.**

**We can do much more together.**

American Medical Association  
535 N. Dearborn St./Chicago, Ill. 60610





The Alcoholism and Drug Abuse Committee met on two occasions recently and has objected to the District Attorney's proposal to ban the use of amphetamines in Tennessee.

### **Roane-Anderson County Medical Society**

In 1959, the society established a scholarship fund to give financial aid to deserving Tennessee medical students. The society recently reported that a total of \$23,000 has now been contributed to medical students in the form of scholarships. Recipients of the scholarships are selected by the respective medical school.

## **national news**

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

The American Medical Association took to Congress its protest against retention of controls over physicians in Phase III of the Economic Stabilization Program.

In a statement to the Senate Committee on Banking, Housing and Urban Affairs, which was considering a one-year extension of statutory authority for the program, the AMA cited the "highly discriminatory" treatment of physicians and other health care providers under the program despite their cooperation and "laudable record of self-restraint."

"We have questioned the wisdom of many of the policies which have been initiated in the various regulatory phases since August of 1971," the AMA statement said. "In particular, we have objected to certain aspects because of the highly discriminatory treatment accorded health care providers. This discrimination has been even heightened under Phase III of the Administration's program. On January 11, 1973, mandatory wage and price controls were suspended for most sectors of the economy but were continued to be enforced upon health care providers. Our opposition to this discrimination does not stem from self-interest, nor is it based solely upon invidious comparison with those segments of the economy no longer subject to mandatory control. The question we raise here is more fundamental. It is submitted that the capricious imposition of controls on select groups only serves to frustrate the basic objectives of the stabilization program itself. If regulation is to be effective, it must recognize the interrelationships existing within the economy in general. Without such accomplishment

the intent of the law will be frustrated.

"Physicians' fees constitute a relatively small percentage of the gross national product (less than 1.5%) and they constitute a small factor in the consumer price index weighting structure (less than 1.8%). Given the relatively slight impact of this factor upon the economy as a whole, the suspension of mandatory controls would not work counter to the goals of the Economic Stabilization Program. Conversely, continued controls could not be expected to yield meaningful restraints throughout the balance of the economy. The continuation of mandatory controls, therefore, does not appear to be consistent with the letter or spirit of the Economic Stabilization Act.

"The Congress found in enacting the Economic Stabilization Act that prompt judgments and actions by the executive branch of the government were necessary to meet extreme economic fluctuations. The Congress, however, directed the President to conduct such emergency programs in a fair and equitable manner and to make such adjustments as may be necessary to prevent gross inequities. Standards established under an emergency program must comply with the criteria of section 203 (b) of the act which provides, among other things, that such standards shall be "generally fair and equitable" and that the program must call for "generally comparable sacrifices by business and labor as well as other segments of the economy."

"We emphasize that this statutory authority presumes the existence of an economic emergency and authorizes a coherent and comprehensive governmental response. Only a system of price stabilization effective at all levels of production and consumption and having equitable incidence within the economy should be countenanced. To invoke controls for one activity without the reasonable expectation of achieving a result having universal application is to employ the statute in a punitive manner. Punitive treatment of health care professionals is neither sanctioned by law nor warranted by the record.

"It is apparent from the physician component of the consumer price index that the medical community has fully complied with efforts to curb inflation during Phase I and II of the new economic policy. In the period from August 1971 to December 1972 the all items category,



as measured by the consumer price index, rose at a rate of 4.2%, the all services component at the rate of 4.6%, while physicians' fees rose only 3.2%. In the period from November 1971 to December 1972 (i.e., during the 14 months of Phase II) the all items category rose 3.8%, the price of all services rose at a rate of 3.8% while physicians' fees rose at a rate of 2.6%. For the calendar year 1972, physicians' fees increased only 2.1%. This percentage is below the 2.5% annual goal set by the Health Services Industry Committee of the Price Commission, and represents a rate of increase of only one-third the rate of increase prior to Phase I. Since the goal of the Economic Stabilization Program was to halve the rate of inflation, the record achieved by physicians surpassed considerably the expectations of the program. Thus, there is no indication that physicians' fees have been a major inflationary factor during the course of the stabilization program, and it is difficult to discern any rationale for imposing mandatory controls in this sector. Continued controls do not appear to be the just reward for this record of compliance. We submit that this precedent could have a demoralizing effect on other industries which might well conclude that a record of restraint does not preclude imposition of a continued regimen of control. . . .

"All activities require the basic factors of production, and all of us must compete in the marketplace for these necessary goods and services. It will become increasingly difficult for the health care services to obtain needed material and manpower unless the stabilization program is administered in a nondiscriminatory fashion."

\* \* \*

The National Cancer Institute has established an International Tumor Immunotherapy Registry to serve as a center for collection, storage and exchange of information on immunological methods of treating cancer.

The registry will record physicians' experience with immunotherapy for human cancer, including methods of administration, results of the treatment, and possible side effects. It will be kept up-to-date by periodic progress reports from the physicians, who will in turn receive newsletters containing summaries of the most recent information. Computers are expected to

handle much of the work involved in maintaining the registry.

Immunological methods of cancer treatment, which stimulate a patient's immune system to attack cancer cells, are increasingly being evaluated against types of cancer not treatable by other methods. Many different approaches are being explored, and results have been variable. It is hoped that the rapid communication afforded by the registry will prevent needless duplication of unsuccessful treatment and encourage cooperation in well-controlled studies of promising approaches.

\* \* \*

The American Medical Association warned of "possible adverse consequences" of abolishing the physician-patient privilege in federal court cases.

The AMA's "deep concern" was expressed in letters from Ernest B. Howard, M.D., AMA executive vice president, to the chairmen of the House and Senate judiciary committees which were considering such an abolition in the proposed new federal rules of evidence.

Dr. Howard reiterated the Association's position that "a qualified physician-patient relationship should be recognized." He said that the pertinent rule in the American Bar Association's Uniform Rules of Evidence would be preferable to the complete abolition of the privilege.

The House committee was sent a copy of the AMA's statement on the matter presented to the Advisory Committee on Federal Rules of Evidence, Judicial Conference of the United States.

"We urge your committee to consider the effect of the abolition of the general physician-patient privilege noted in our statement and the confusion that may become prevalent if state and federal courts observe different rules when considering evidence based upon confidential communications made by a patient to his attending physician during the course of the physician-patient relationship," Dr. Howard said.

"The American Medical Association, as you will notice, does not advocate that an absolute or unrestricted physician-patient privilege be established. Acceptance of the basic concept of the physician-patient privilege (with limitations and restrictions that assure the proper administration of justice) is vital, however, to avoid abuse of individual rights and inhibition of frank



communication essential in the physician-patient relationship."

"The physician-patient relationship is traditionally a confidential relationship requiring a high level of trust on the part of the patient. For proper diagnosis and treatment of a patient's illness it is often essential that the patient be encouraged to disclose facts, circumstances, opinions and attitudes concerning his personal or family life. Some of these disclosures are pertinent to the diagnosis and treatment and others are not. The pertinence cannot be determined until the disclosure has been made by the patient and evaluated by the physician.

"Patients generally believe that what they disclose to their physicians in confidence will not be revealed to others without the patient's consent. Although most patients probably do not understand the legal concept of privileged communication, they would certainly be shocked to learn that their physician could be compelled, under penalty of contempt, to reveal in a court proceeding the most intimate and private information which they have given to the physician in reliance on this confidentiality. Obviously, not all of the information given by a patient to a physician has that degree of intimacy and privacy which would make compulsory disclosure disruptive of the physician-patient relationship. Because of wide variations in personal and individual sensitivity of patients, however, it does not appear to be practical to enumerate the specific kinds of information that are barred from disclosure. Proper concern for individual rights would seem to dictate that, as far as possible, the patient should be the one to determine what kind of information is to be considered confidential and barred from compulsory disclosure.

"It is relatively easy to identify areas of medical inquiry which are most likely to result in disclosures by a patient that should be kept secret. These would include sexual impotence, sexual sterility, venereal disease, pregnancy of the unwed, homosexuality, leprosy, epilepsy, and artificial insemination. Disclosure of personal information in these areas would be considered harmful and grossly embarrassing to most patients. Disclosures in many other areas, however, would be equally repugnant to some patients.

"In the field of psychiatric care, especially, the free expression of facts, occurrences, actions,

thoughts, feelings and dreams by the patient to the physician is often deemed essential for effective diagnosis and treatment. In this field, compulsory disclosure of such matters would be most harmful to the welfare of the patient.

"The medical profession recognizes also that the proper administration of justice is essential for the welfare of the public, including patients and physicians. It is aware that a rule of complete privilege, such as that applied in the attorney-client relationship can lead to abuses which result in a miscarriage of justice. If a patient uses a broad physician-patient privilege to bar disclosure of relevant information which would adversely affect the outcome of litigation of a liability claim made by him, this abuse of the privilege would be conducive to fraud.

"On the other hand, fraud against a patient could also be perpetrated by threatening to compel his physician to disclose private and confidential information that has little if any relevancy to the issues raised in the litigation. The total abolition of the physician-patient privilege would leave the patient substantially without protection against this kind of abuse. Judicial determination of relevancy alone would not be sufficient protection, since some degree of disclosure would be necessary to obtain the judicial determination.

"We believe that justice and a true concern about individual rights requires that a reasonable balance be reached between these competing interests. Unrestricted physician-patient privilege has undoubtedly led to instance of miscarriage of justice. Denial of any privilege, however, would also lead to abuse of individual rights and an impairment of the quality of medical care. The proper solution appears to be the acceptance of the basic concept of the physician-patient privilege with those minimum limitations and restrictions on the privilege as are reasonably necessary to assure the proper administration of justice."

The American Bar Association rule, the AMA said, "appears to provide reasonable limitations on the physician-patient privilege, sufficient to assure the proper administration of justice. It also appears to offer the patient at least a minimum degree of protection for his individual rights in relation to the disclosure of private and confidential information deemed harmful or embarrassing to him. It would, at least, be less harmful to the quality of medical care available



to the public than a rule would be which completely abolished the privilege."

## medical news in tennessee



RUDOLPH H. KAMPMEIER, M.D.

### American College of Physicians Announces 1973 Award Recipients

PHILADELPHIA—Rudolph H. Kampmeier, M.D., was one of eight nationally prominent physicians who have been named recipients of the 1973 American College of Physicians awards for outstanding contributions to the progress of medicine and health. The College is an international medical specialty society representing more than 20,000 internists and specialists in related fields.

The awards were presented Monday, April 9, 1973, at the opening event of the American College of Physicians 54th Annual Session held at the Conrad Hilton Hotel, Chicago, Ill. The College President, William A. Sodeman, M.D., Philadelphia, Pa., made the presentations.

The Alfred Stengel Memorial Award for outstanding service to the American College of Physicians went to Dr. Kampmeier, Nashville,

Tenn., who is Professor Emeritus, Vanderbilt University School of Medicine, and a Past President of the American College of Physicians.

### Kampmeier Retires As Editor Of Southern Medical Journal

R. H. Kampmeier, M.D., former editor of the *TMAJ*, retired as of the first of this year as editor of the *Southern Medical Journal*. The January issue was a "festschrift" in honor of Dr. Kampmeier. Tennessee physicians who contributed to the festschrift are Drs. John M. Flexner, Robert A. Goodwin, Roger M. Des Prez, Anderson Spickard, Robert H. Alford, Grant W. Liddle, Robert M. Carey, Janice G. Douglas, Philip W. Felts, Oscar B. Crofford, Alan L. Graber, William W. Lacy, William D. Salmon, Jr., William F. Meacham, Warren F. McPherson, John L. Sawyers, H. William Scott, Jr., Barton McSwain, William Whitehead, Lynch Bennett, Richard France, William J. Stone, Andrew M. Michelakis, Fred Goldner, Eric Engel, Fasih U. Samad, Robert C. Hartman, Alexander C. McLeod, James D. Snell, Jr., Randolph Batson and F. Tremaine Billings, Jr., all of Nashville, and William J. Tolleson, Memphis.

### Ad Hoc Abortion Committee Appointed

TMA President Dr. William T. Satterfield, Sr., Memphis, has appointed a special ad hoc committee to study the abortion controversy in light of the recent U.S. Supreme Court Ruling. The committee is composed of: W. Powell Hutcherson, M.D., Chattanooga; Stewart A. Fish, M.D., and Sam P. Patterson, M.D., Memphis; C. Gordon Peerman, Jr., M.D., and Russell T. Birmingham, M.D. of Nashville, and John H. Saffold, M.D. of Knoxville.

### Dr. Dial

A new public service has been launched in Chattanooga which is designed to give the latest information on a variety of health problems to anyone who phones in. The program, titled "Dr. Dial" permits the caller to listen to a recorded message on a particular facet of health. Each tape is updated periodically in order to maintain current information.

## personal news

DR. LUTHER BEAZLEY, Donelson, has been ap-



pointed to the Tennessee Medicaid Medical Advisory Committee by Governor Dunn.

DR. J. McDONALD BURKHART, Knoxville, and DR. PHILIP L. FUSON, Morristown, are participating in the Emergency Medical Technicians training program in their areas.

DR. DAVID S. CARROLL, Memphis, has been named President of the Radiological Society of North America.

DR. LOCKE CARTER, Kingsport, has been elected president of the medical and dental staff of the Holston Valley Community Hospital in Kingsport.

DR. MAX A. CROCKER, Lexington, has accepted a position as associate professor of Family Medicine at the University of Kentucky School of Medicine.

DR. WILLIAM G. CROOK, Jackson, has been named recipient of the 1972 Enuresis Foundation Award.

DR. C. HARWELL DABBS, Knoxville, has moved his practice to Rockwood.

DR. ROBERT DEMOS, Chattanooga, has been appointed chairman of the Moccasin Bend Regional Subcommittee of the Alcohol and Drug Advisory Commission.

DR. HAMEL B. EASON, Memphis, has been elected president of Methodist Hospital medical staff succeeding DR. E. N. STEVENSON.

DR. HAMEL B. EASON and DR. JOHN L. HOUSTON, both of Memphis, have been chosen Medical Staff Officers of the year at Methodist Hospital.

DR. WILLIAM A. HENSLEY, Cookeville, has been certified as a Diplomate of the American Board of Family Practice.

DR. ROBERT G. HEWGLEY, Athens, has been elected Chief of Staff of Epperson Hospital succeeding DR. BILL FOREE.

DR. BOBBY CLARK HIGGS, Jackson, has been selected by the American Academy of Pediatrics to serve as a Head Start consultant in Jackson.

DR. JOHN H. LILLARD, Athens, has assumed duties as assistant regional health officer of the Southeast regional office of the Tennessee Department of Public Health.

DR. HOUSTON LOWRY, Madisonville, has been appointed chairman of TMA's Rural Health Committee succeeding DR. CHARLES TRAHERN who has moved his practice to Arizona.

DR. C. BRUCE C. MARSH, Chattanooga, has received notification of his qualifications as a diplomate to the American Board of Internal Medicine.

DR. DAVID McCONNELL, Newport, has been elected President of the Newport Chamber of Commerce.

DR. ROBERT M. MILES, Memphis, has been named President-Elect of the Southeastern Surgical Congress during the 41st annual assembly in New Orleans.

DR. M. FRANK TURNEY, Knoxville, professor and chairman of University Hospital's neurosurgical section, has been named president-elect of the Southern Neurosurgical Society.

DR. ROBERT A. UTTERBACK, Memphis, has been

elected President of the newly formed Memphis Academy for Neurology. Others elected were DR. JESSE LAWRENCE, President-elect; and DR. HELIO LEMMI, Secretary-Treasurer.

# announcements

## CALENDAR OF MEETINGS

### STATE

May 17 Middle Tennessee Medical Association, Blue Grass Country Club, Hendersonville

### NATIONAL

April 23-28 American Academy of Neurology, Sheraton-Boston Hotel, Boston

April 25-27 American Surgical Association, Century-Plaza Hotel, Los Angeles

May 2-5 American Gynecological Society, Broadmoor Hotel, Colorado Springs

May 11-12 American Association of Clinical Urologists, New York Hilton Hotel, New York

May 13-17 American Urological Association, New York Hilton Hotel, New York

May 16-20 American Pediatric Society, Hilton Hotel, San Francisco

May 21-24 American College of Obstetricians and Gynecologists, Americana Hotel, Bal Harbour, Fla.

May 21-24 American Thoracic Society, Statler Hilton Hotel, New York

June 10-14 American Proctologic Society, Detroit Hilton Hotel, Detroit

June 14-16 American Electroencephalographic Society, Statler Hilton, Boston

June 16 American College of Preventive Medicine, New York

June 20-22 Endocrine Society, Sheraton-Chicago Hotel, Chicago

June 23-24 American Diabetes Association, Drake Hotel, Chicago

June 24-27 American Association of Plastic Surgeons, Waldorf-Astoria, New York

June 24-28 American Medical Association, Americana Hotel, New York

## CONTINUING EDUCATION OPPORTUNITIES

### Meharry Medical College CME Courses

The following continuing education courses are being offered by the Meharry Medical College during 1973:

May 10-11 The Robert Brown Memorial Pulmonary Disease Symposium, Learning Resources Center, Kermit Brown, M.D.



- May 23-24 13th Annual Seminar in Psychiatry, Location to be announced, Vergil Metts, M.D., (Sponsored jointly with Vanderbilt Univ.)
- May 25-26 The Family Physician and the Emotionally Ill Patient, Learning Resources Center, Jeanne Spurlock, M.D.
- November 3 Radiation Technology, Learning Resources Center

### University of Tennessee CME Courses

The following continuing education courses are being offered by the University of Tennessee College of Medicine during 1973:

<i>Date:</i>	<i>Course:</i>
May 9-11	Pulmonary Disease
May 9-12	Clinical Electrocardiography (Paris Landing State Park Inn, Buchanan, Tennessee)
May 14-18	Intensive Review of the Science of Anesthesiology
May 20-23	Basic Principles of Rhinoplasty

### Vanderbilt University CME Courses

<i>Date</i>	<i>Title, Location, Program Coordinator</i>
April 27-28	Pros and Cons of Group Practice, (Organization Alternatives in Medical Practice) University Club of Nashville, Paul Slaton, M.D.
May 23-24	13th Annual Seminar in Psychiatry, Location to be announced, Vergil Metts, M.D.
July 11-12	Kentucky Medical Association, Annual Meeting, Lake Barkley, Kentucky
Sept. 19-21	Endocrinology (American College of Physicians) Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.
Sept. 26-28	The Injured Child (American Academy of Orthopedic Surgeons) Underwood Auditorium, Vanderbilt, John Connolly, M.D.
Oct. 10-12	Hypertension (American College of Cardiology) Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.
Oct. 25-27	Child Neurology, Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

### University of Kentucky College of Medicine

<i>Date</i>	<i>Title, Location, Program Coordinator</i>
April 30-May 1	Cardiac Diagnosis and Treatment, U. K. Medical Center, Borys Surawicz, M.D.
May 2-4	Symposium on Pediatric Radiology, University of Kentucky, Frank R. Lemon, M.D.
May 24-25	Annual Pediatric Review, U.K. Medical Center, Nancy Holland, M.D.

## 1973 POSTGRADUATE COURSES

These courses are arranged through the cooperation of the directors and the institutions involved. Registration forms and requests for information are to be directed to: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104. Tuition Fees: ACP Members and Fellows, \$80; Non-Members, \$125; Associates, \$40; Other Residents and Research Fellows, \$80.

<i>Date</i>	<i>Title and Location</i>
Apr. 24-27	PULMONARY DISEASE, University of Pennsylvania School of Medicine, Philadelphia, Pa.
Apr. 25-27	HEPATOBIILIARY DISEASE IN CLINICAL PRACTICE, University of California, San Francisco
Apr. 25-27	ADVANCES IN DIAGNOSIS AND MANAGEMENT OF INFECTIOUS DISEASE, University of Wisconsin, Madison, Wis.
May 16-18	THE RHEUMATIC DISEASES—CLINICAL AND IMMUNOLOGICAL ASPECTS, University of Texas Southwestern Medical School, Dallas, Texas
May 16-18	CLINICAL AUSCULTATION OF THE HEART, Georgetown University Hospital, Washington, D.C.
May 21-25	INTERNAL MEDICINE: CURRENT CONCEPTS OF CLINICAL PROBLEMS, University of Cincinnati Medical Center, Cincinnati, Ohio
May 21-25	INTENSIVE CARE UNITS, St. Vincent's Hospital and Medical Center of New York, New York, N.Y.
May 29-June 1	RECENT ADVANCES IN ENDOCRINOLOGY AND THEIR CLINICAL APPLICATIONS, Royal Victoria Hospital, Montreal, Que., Canada
June 4-8	HEMATOLOGY, University of Washington School of Medicine, Seattle, Washington
June 13-15	ONCOLOGY AND CHEMOTHERAPY, University of Southern California, Los Angeles, California
June 18-22	CLINICAL ASPECTS OF BLOOD TRANSFUSION, Michigan State University, East Lansing, Mich.
June 25-29	ADVANCES IN INTERNAL MEDICINE: RECENT PERSPECTIVES, 1973, Banff, Alta, Canada

### Master Interpretation of Clinical Electrophysiology

The University of Miami School of Medicine and the Council on Clinical Cardiology of the American Heart Association will present a postgraduate seminar entitled: "Master Interpretation of Clinical Electrophysiology" on May 29-31, 1973. The program will be held at the Contemporary Hotel at Disney World, Lake Buena Vista, Florida.



Tuition for the course is \$150 nonmembers; \$125 Fellows and members of the Council on Clinical Cardiology, and Physicians in training. Registration is limited to 150.

Inquiries should be addressed to Dr. Louis Lemberg, University of Miami School of Medicine, P.O. Box 875, Biscayne Annex, Miami, Florida 33152.

### **American Board of Family Practice Sets Certification Exam Date**

The American Board of Family Practice will give its next two-day written certification examination on October 20-21, 1973, in various centers geographically distributed throughout the United States. Information regarding the examination can be obtained by writing Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506.

It is necessary for each physician desiring to take the examination to file a completed application with the Board office. Deadline for receipt of applications at the Board office is August 1, 1973.

### **National Congress on Medical Ethics**

The Fourth National Congress on Medical Ethics will be held April 26, 27, 28, 1973, Washington Hilton, Washington, D.C.

Among the subjects to be discussed will be: "What is Medical Ethics"; "How Does the Student or the Resident or the Nurse See Medical Ethics"; "The Teaching of Medical Ethics"; "Medical Ethics and the New Biology," etc. There will also be a skit entitled "Grand Rounds on Medical Ethics."

### **Symposium on Pediatric Radiology**

This three-day symposium to be held May 2-4, 1973 will deal with many practical problems in the diagnosis of abdominal, chest, and skeletal disease in childhood. A distinguished guest and University of Kentucky faculty will join in presenting the conference, organized to meet the need of practicing pediatricians and radiologists.

Direct inquiries to: Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.

### **National Health Council Offers Short Courses**

The National Health Council, through its Committee on Continuing Education announces ten short courses in 1973 selected for personnel of official, professional, and voluntary health agencies and organizations.

The course subjects will include: Comprehensive Health Planning, Consultation Skills, Community Organization in Health Care Services, Executive Development, Leadership Development, and Voluntary Health Agency in the Community.

The ten courses will be conducted by seven universities on various dates ranging from April through

August 1973. Cooperating universities are: Columbia University (School of Public Health), University of Florida (College of Health Related Professions), George Williams College (Division of Social Work Education), Indiana University (Graduate School of Business), University of Michigan (School of Public Health), University of Oklahoma (Department of Health Administration and School of Health), and Washington University (Office of Conferences and Short Courses).

Descriptive brochures and other information on these courses may be obtained by writing to: Continuing Education Program, National Health Council, 1740 Broadway, New York, New York 10019.

### **Medical Group Practice Organization Plans Southeast Regional Meeting**

The Lewis-Gale Clinic, Inc. of Salem, Virginia, will host the Southeast Regional Meeting of the American Association of Medical Clinics Friday and Saturday May 4 and 5 at the Sheraton Motor Inn in Roanoke. The two-day session, covering various phases of the group practice of medicine, will be open to all group practice physicians and administrators in the Region, which includes Tennessee.

The American Association of Medical Clinics is the national association representing all forms of medical group practice and group practice physicians.

Further information or registration details may be obtained by contacting the Program Chairman:

Warren L. Moorman, M.D.

Lewis-Gale Clinic, Inc.

1802 Braeburn Drive

Salem, Virginia 24153

### **Institute for Sex Research Summer Program in Human Sexuality July 8-19**

Lecture course, forums on socio-sexual issues, sex counseling symposia, attitude-reassessment program, informal workshops. \$325 includes housing. Registration ends June 18.

Write: Institute for Sex Research

416 Morrison Hall

Indiana University

Bloomington, Indiana 47401

### **The American College of Obstetricians and Gynecologists**

The Annual Clinical Meeting of American College of Obstetricians and Gynecologists will be held May 21-24, Americana Hotel, Bal Harbour, Fla. New this year are postgraduate courses throughout the meeting as well as preceding it, and informal Curbstone Consultations with two authorities on each subject. There will be new Self-Assessment Tests in Clinical Obstetrics and Clinical Gynecology. Registration fee for nonmembers, \$125.

Contact: Donald F. Richardson, Associate Director, American College of Obstetricians and Gynecologists, One East Wacker Drive, Chicago, Ill. 60601.



## Southern OB-GYN Seminar

The 19th Annual Ob-Gyn Seminar will be held again this year in Asheville, North Carolina at the Grove Park Inn, July 22 through July 27. Broad aspects and subjects in obstetrics and gynecology will be presented.

For registration information please contact the Secretary, Dr. George T. Schneider, 1514 Jefferson Highway, New Orleans, Louisiana 70121.

## Tennessee Heart Association Annual Meeting

The Scientific Session of the twentieth Annual Meeting of the Tennessee Heart Association is scheduled for May 17 through May 19 at the Regency Hyatt House in Knoxville.

Frank London, M.D., president of THA, says an excellent program is planned with visiting lecturers discussing: The Clinical Evaluation of Chest Pain, The Selection of Patients for Coronary Surgery: Radiologic-Pathologic Correlation, Surgery of the Coronary Circulation, Post-operative Evaluation of Surgically-treated Coronary Artery Disease, Approach to Neonate with Heart Disease, Congenital Heart Disease in the Adult, Natural History of Common Congenital Cardiac

Defects with Consideration to Surgical Intervention.

Edward Buonocore, M.D., president of East Tennessee Heart Association, will conduct a Diagnostic X-ray Conference of Heart Disease.

The guest faculty features J. Willis Hurst, immediate past president of American Heart Association. Dr. Hurst is professor and chairman of the Department of Medicine, Emory University School of Medicine, and Chief of Medicine at Grady Memorial Hospital.

Other faculty include Alexander S. Nadas, M.D., professor of Pediatrics at Children's Hospital, Harvard Medical School; Melvin P. Judkins, M.D., professor and chairman, Department of Radiology, Loma Linda University; David C. Sabiston, Jr., M.D., professor and chairman of the Department of Surgery, Duke University Medical Center.

James J. Acker, M.D., and J. E. Acker, Jr., M.D., of the University of Tennessee Research Center and Hospital in Knoxville, are co-chairmen for the session which will be accredited for 15 elective hours by the American Academy of General Practice and the Tennessee Medical Association.

For information regarding registration contact James C. Arnold, Executive Director, Tennessee Heart Association, 205-22nd Avenue, North, Nashville, Tennessee 37203.

## 20th Scientific Session and Annual Meeting 16th General Assembly

# TENNESSEE HEART ASSOCIATION

MAY 17-19, 1973—REGENCY HYATT HOUSE—KNOXVILLE

	Thursday, May 17	Friday, May 18	Saturday, May 19
Morning	Scientific Session Film Festival	M.D.'s Tour of U.T. Hospital Clinical Presentation — J. Willis Hurst, M.D. CPR Demonstration Film Festival	Awards Breakfast General Assembly
Afternoon	Scientific Session Non-Medical Session —"What You Always Wanted to Know—But Were Afraid to Ask"	Joint Medical & Non- Medical Session Panel Sessions	

## SPECIAL EVENTS FOR THE LADIES

Knoxville Historical Tour  
Blount Mansion & Craighead Jackson House  
Pigeon Forge & Gatlinburg  
West Town Shopping Mall

## SCIENTIFIC SESSION

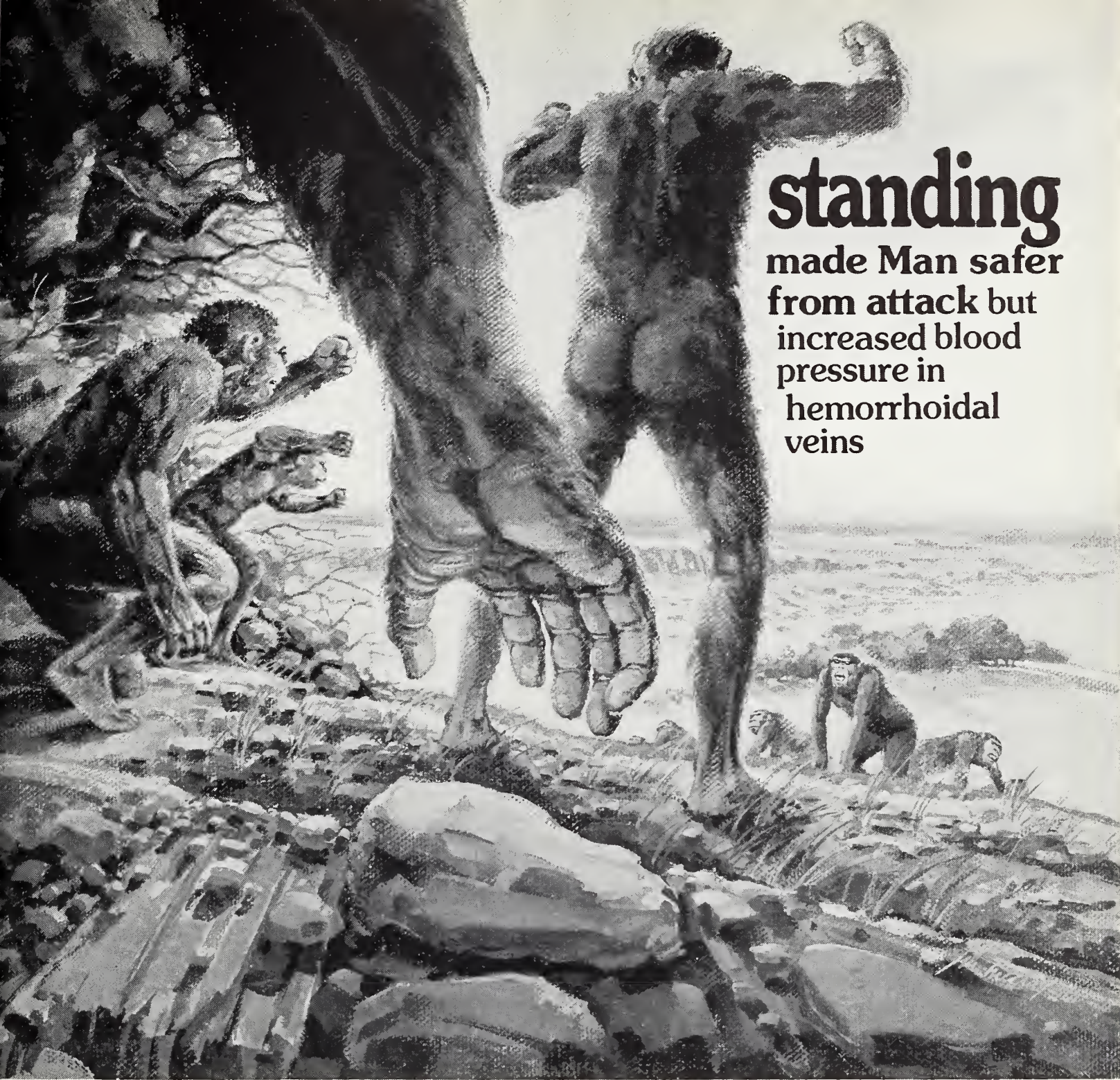
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Heart Association  
features

J. WILLIS HURST, M.D.  
Past President, American Heart Association

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The Selection of Patients for Coronary  
Surgery: Radiologic-Pathologic Correlation  
Surgery of the Coronary Circulation  
Post-operative Evaluation of Surgically-  
treated Coronary Artery Disease  
Approach to Neonate with Heart Disease  
Congenital Heart Disease in the Adult  
Natural History of Common Congenital  
Cardiac Defects with Consideration to  
Surgical Intervention  
Diagnostic X-ray Conference of Heart  
Disease





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increased blood  
pressure in  
hemorrhoidal  
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ANGP-33



**James L. Goddard, M.D., Former FDA  
Commissioner, Statement to Senate  
Subcommittee on Health**

Mr. Chairman, I am James L. Goodard, M.D., chairman of the board of Ormont Drug & Chemical Company, Englewood, N.J. In recent years, the attention of those interested in the field of pharmaceuticals has been directed on several occasions to the issues surrounding the "unapproved" use of marketed drugs or chemicals. On several occasions, Congressional committees have raised the issue during hearings on related matters, but this is to my knowledge, the first hearing devoted solely to the subject.

The issue is a complex one—with ramifications relating to the quality of patient care, the role of the federal agency vis-a-vis the medical profession, the responsibilities of the pharmaceutical firms involved, and the legal liabilities of physicians who use marketed drugs for unlabeled uses. In the short time available to me I cannot cover all aspects of this important subject and I will therefore limit my remarks to the issues of the effect on patient care and what steps can be taken which may improve the situation.

With respect to patient care, my concerns are related to the potential dangers that may arise as a result of using marketed drugs for unlabeled uses. There is the danger that incomplete information will denigrate the quality of care. Ordinarily, the physician has rather comprehensive information available to him from a variety of sources:

- a. the professional literature
- b. the package circular
- c. Physicians Desk Reference
- d. AMA handbook of drugs
- e. promotional material from manufacturers.

When marketed drugs are used for unlabeled uses, it is apparent that existing information will not be directly applicable and that the professional literature becomes the sole source of printed information. This could be sufficient were it not for the fact that much of the "unapproved" use is based on word of mouth "testimonials" rather than careful study of material presented in a journal. An equally sig-

nificant drawback is that usage is often based on a single uncorroborated study rather than a number of well controlled studies.

This means that the physician really is unable to judge comprehensive efficacy; have any significant knowledge as to side effects which might be unique in relation to the "unlabeled" indication; that drug interactions can occur and as a result patient care would suffer.

I concede all of these may not occur and the patient may indeed benefit—as I also concede the attending physician must be one to make the ultimate judgment as to which medication for which condition.

What then can or should be done? I would suggest the following:

**1. By FDA**

a. Under existing authority very little could be done. FDA should not get involved in supervising medical practice. The problem would be lessened if FDA were more responsive to well documented studies demonstrating effectiveness for new uses.

b. Under new authority, FDA could formally provide the manufacturer with the opportunity to assume the burden of proof and if declined by the manufacturer holding the NDA, then any other manufacturer will do so: with proviso that a license must be issued by the first company and that royalties be paid; or special clinical pharmacology centers underwritten by FDA grants could; after review by NAS-NRC be asked to undertake study of efficacy. Following this—the drug would be available for manufacture by any company willing to pay royalties to the originating firm.

**2. By Medical Profession**

a. In hospital—drug utilization committees to evaluate drug usage by physicians practicing within the hospital.

b. In community—drug utilization review by Medicare-Medicaid organizations or by new mechanisms—e.g. one new mechanism would be available at such time that time sharing computers are widely utilized by M.D.'s in their office practice. Such a system is feasible today, and at a realistic cost but has not been implemented in any commodity. Many other benefits would become readily available which would be potentially of greater significance than monitoring drug usage.

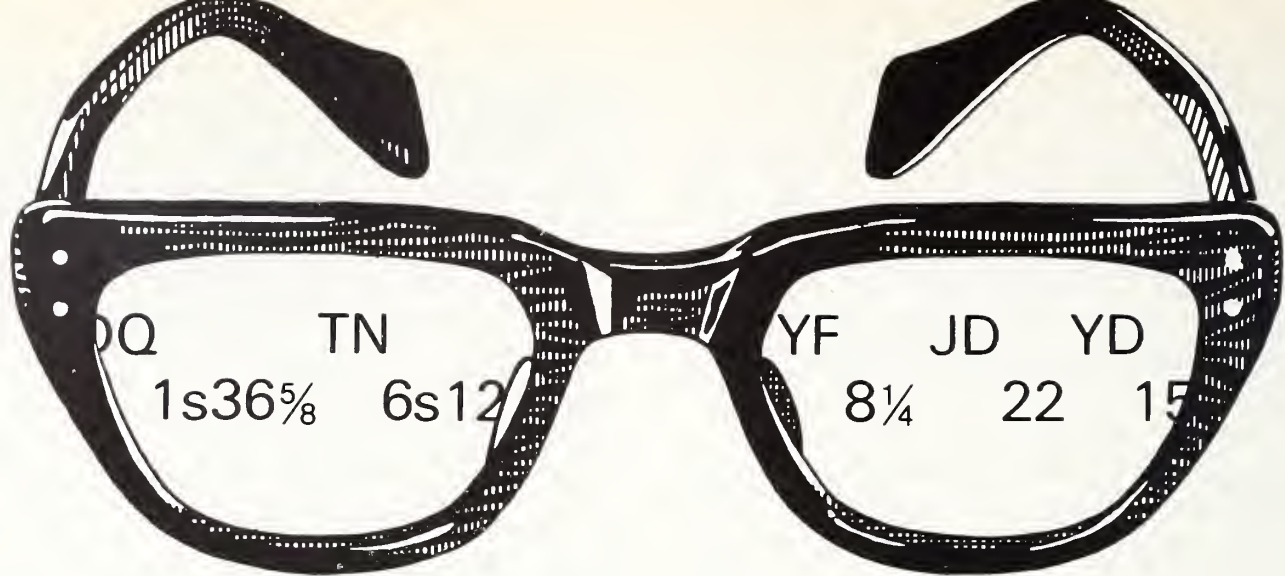
**3. By State Agencies**

It would not be practical under existing or









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## AMA Legislative Department—A Vital Service

The American Medical Association's Legislative Department provides a vital service to member physicians all across the country. At the same time, it is regarded by many as one of the most substantial of the intangible benefits which the AMA offers to its membership.

The Legislative Department staffs the AMA Council on Legislation and specializes in all phases of national legislation. After studying, analyzing, and interpreting all Congressional legislation pertaining to medical and health care, the department makes available this information to state, county, and specialty medical societies, members of the public, and other organizations. This usually totals about 2,300 bills of medical interest per Congress. An increased responsibility of this department is the critical review of government regulations which often seriously affect application of law. There are few physicians who could devote the time necessary to accomplish this on their own and, yet, this information is vital because it affects the way medicine is practiced in this country.

To keep key medical leadership aware of legislative developments when Congress is in session, the department writes, publishes, and distributes LEGISLATIVE ROUND-UP, weekly, to approximately 5,000 key state, county, and specialty medical society officers.

Another vital activity is the assistance given to AMA Officers in the preparation of testimony and presentations for Congressional hearings. The Legislative Department works with the appropriate AMA scientific personnel to gain the benefit of their expertise before assembling any presentation. The Council on Legislation can then use this resource material to formulate a sound recommendation as to the best policy position for the AMA. Many people do not realize the AMA is often requested to testify because its views are valued not only by Congress but by the various governmental agencies.

The department also assists in the development, writing, and presentation of draft legislation for consideration by members of Congress, such as the AMA's own national health insur-

ance bill, MEDICREDIT. They also assist in the development of presentations to the regulatory agencies.

The staff participates in providing legislative orientation to the AMA's Councils and Committees as well as to members of the profession who are in Washington, D.C. to visit members of Congress.

Finally, the department has undertaken the monitoring of state legislation with a view towards eventually assisting the profession to attain its legislative goals on a state as well as on a national level.

From Medicaid and Medicare regulations to chiropractic issues, national health insurance and appropriations for HEW programs, federal and state medical and health care legislation affects all physicians in some way. The AMA's Legislative Department maintains constant surveillance and provides AMA physician policy makers with accurate and up-to-date information. The leadership of organized medicine can make their judgments and represent AMA's membership with a sound base of resources.

AMA Legislative Dept.

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**The lesions on his face may be solar/actinic — so-called “senile” keratoses...and they may be premalignant.**

## Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics: the typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent, and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.



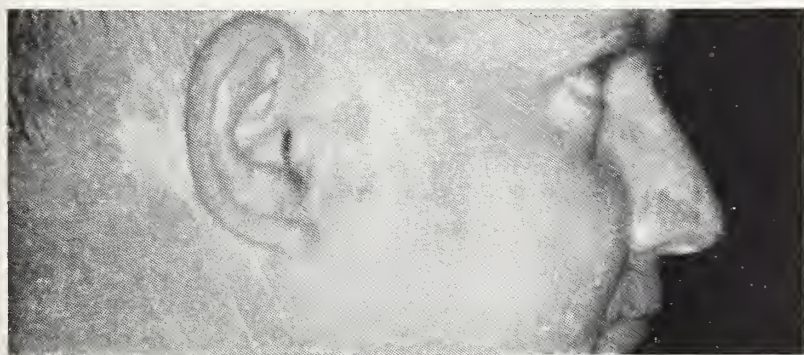
*Patient P.T.\* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electro-surgical procedures.*

## Sequence of therapy/ selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; the reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

## Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.



*Patient P.T.\* seen on 6/12/67, seven weeks after discontinuation of 5%-FU cream. Reaction has subsided. Residual scarring not seen except for that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.*

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local — pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported — insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with non-metal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers — containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes — containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

**This patient's lesions  
were resolved with**

**Efudex<sup>®</sup>**  
**(fluorouracil)**  
**5% cream/solution**  
**...a Roche exclusive**



Roche Laboratories  
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Nutley, N.J. 07110

\*Data on file, Hoffmann-La Roche Inc., Nutley, N.J.



## Answers to the Cooper Quiz (from pages 342-343)

THE NEW ENGLAND JOURNAL OF MEDICINE

October 5, 1972

1. TRUE. "Clearly, the results in the patients with cardiomyopathy are entirely consistent with their clinical status—advanced myocardial failure. By contrast, the measurements in the alcoholic patients were not in keeping with their clinical status. Although less marked than in the cardiomyopathy group, measurements except blood pressures differed significantly from those of the matched normal control patients. Moreover, all differences in the 'normal' alcoholic patients were in the same direction—that of ventricular malfunction—as those in the cardiomyopathy group. Since the ambulatory patients with chronic alcoholism were selected because they have no symptoms or signs and no electrocardiographic or roentgenographic abnormalities indicating heart disease, the results suggest that they already have cardiac malfunction and may be on their way to alcoholic heart disease." (p. 679)

EDITOR'S NOTE: Much more sophisticated studies than we have mentioned were done, all indicating depressed myocardial function.

2. TRUE. "The causative role of surfactant deficiency in the production of pulmonary disease remains to be established. Scarpelli concludes that 'there is no disease, including the respiratory distress syndrome, in which a primary defect of the surfactant system has been demonstrated conclusively as the etiological factor,' an opinion shared by Clements. It seems, then, that with the possible exception of the premature infant, surfactant deficiency is a result, not a cause of alveolar damage. However, once surfactant deficiency has developed, the consequences in terms of lung function are serious." (p. 694)
3. TRUE. "Infections with *Entameba histolytica* in this country are primarily asymptomatic in the form of the intestinal carrier state. Amebic dysentery and extraintestinal localization such as liver abscess occur relatively infrequently. On rare occasions severe and even fatal infections may be encountered among inhabitants of mental institutions and military personnel and after travel in highly endemic areas in which presumably extremely virulent strains may occur." (p. 701)

October 12, 1972

4. TRUE. "The metabolic effects of L-dopa were studied in 23 patients with Parkinsonism. Levels of plasma growth hormone were elevated two hours after administration of 0.5 to 1.0 g of L-dopa, and this response persisted for at least one year. Plasma glucose was increased at two hours, and free fatty acids at four hours. Chronic therapy significantly increased serum cholesterol (approximately 10 percent), but no change in

serum triglycerides, thyroxine, fasting blood sugar, and 24-hour urinary excretion of 17-keto and 17-ketogenic steroids was observed. After one year of chronic L-dopa therapy, there was a decrease in glucose tolerance associated with a delayed and exaggerated insulin response. The changes in growth hormone and carbohydrate tolerance suggest that patients receiving L-dopa for long periods should be monitored for the possible development of frank acromegaly." (p. 729—Abstract)

5. 30% "Death from heatstroke is not uncommon. Casualties occur both in the military and in civilian practice particularly among athletes, laborers, and alcoholics. Reported mortality rates range from 17 to 70 percent, being related to the magnitude of the thermal stress and the age of the patient. Acute circulatory failure has been observed to precede death in more than 80 percent of the cases. The physiologic alterations of heat stress have been studied, but the mechanism of cardiovascular collapse during heatstroke has not been established definitively in man. . . . From our clinical observations the heatstroke victim's circulatory pattern resembles in many respects the well defined low peripheral vascular resistance and high circulatory demand of other conditions involving tissue injury such as trauma or sepsis." (p. 734)
6. TRUE. "It becomes apparent that treatment of heatstroke depends on two principal considerations, the first of which is that the stress and injury imposed by hyperthermia should be removed by restoration of the body temperature to normal as rapidly as possible. Experience has demonstrated that this goal can be most effectively accomplished by immersion of the body in an ice bath. The administration of pheothiazine as recommended by Hoagland and the use of sponging are both slow to reduce body temperature. The second, and of equal importance, is support of the cardiovascular system to enable it to meet the large circulatory demand that occurs during hyperthermia and afterward. Any reduction in circulating plasma volume secondary to previous loss of body fluid by evaporation should be replaced by Ringer's lactate solution administered intravenously. The average volume used during the first four hours in this group of patients was moderate, approximately 1200 ml. Peripheral vascular pooling does not appear to be a major factor. Since central venous pressure ordinarily is high under these conditions, knowledge of this value would be helpful only when it is below 5 cm of water, probably indicating an inadequate filling pressure in the right side of the heart and the need for greater blood volume. Because of the initial low urine output and the possibility that tubular flow would be reduced owing to renal vasoconstriction and the secondary development of lower-nephron nephrosis, osmotic diuresis was induced by mannitol administration; 12.5 g of mannitol was given as a bolus initially and was supplemented by an



additional dose of 12.5 g per liter of intravenous fluid. Finally, heart failure, as indicated by elevated CVP and evidence of inadequate cardiac output, requires treatment directed toward improvement of myocardial contraction. Therapy of this type is particularly important in the elderly or in others in whom a previously insufficient myocardium may not respond adequately to the elevated circulatory demand of heatstroke. Digitalis has been recommended in the past. Beta-adrenergic stimulation of the myocardium by an agent such as isoproterenol proved effective in the hypotensive patient. The use of alpha-adrenergic substance such as norepinephrine appears illogical since it would promote peripheral vascular vasoconstriction without actually improving perfusion or increasing cardiac output. In addition, such vasoconstriction might prevent continuing skin heat exchange and cause further ischemic damage of organs such as the kidney or liver." (p. 736)

7. TRUE. "Although psoriasis is an inherited disorder, transmitted in a fashion most consistent with multifactorial models of inheritance, no genetic markers have yet been found in association with this disease. Russell, Schultes, and Kuban first noted an increased frequency of HL-A13 in psoriatic patients. The present study is an independent survey on another series of patients in an effort to confirm their initial observation. In addition to the finding of the same high frequency of HL-A13, the overall degree of disturbance in frequencies of HL-A antigens was greater than in any disease thus far reported." (p. 740)

8. TRUE. "The demonstration of CMV infection of the genital tract in an asymptomatic male indicates that this virus may be transmitted by venereal contact. The more frequent recovery of CMV from the cervix of younger and primiparous women than from multiparous women over 25 years of age may correlate more directly with sexual activity than with changing endocrine factors as has been suggested.

"The amounts of infectious CMV found in semen in the present case are considerably higher than are found in other postnatally acquired infections. The persistence of extraordinarily high titers of CMV for weeks in the face of circulating antibody indicates that in the reproductive tract, as in the urine and blood, this virus may evade humoral defenses and can remain a protracted hazard.

"The clinical features of the present case were not unusual. The patient had no evidence of immunologic dysfunction. Heterophil-antibody-negative mononucleosis is frequently caused by CMV infection, and this illness is common among young adults. It seems possible that the presence of CMV in semen also is not unusual." (p. 758)

October 19, 1972

9. TRUE. "Examination of the etiologic precursors of CHF as it occurs in the general population,

undistorted by the selective bias of hospital-admission practices or varying criteria, reveals hypertension to be the salient feature before failure in 75 percent of the victims of myocardial decompensation. CHF, as defined, was an extremely lethal process; 60 percent of the men and 40 percent of the women died within five years of onset. This is an average annual death rate about seven times that of persons without CHF. An appalling prognosis was noted for this group of predominantly hypertensive patients with CHF, even if those with established coexisting coronary heart disease are excluded. As many as 20 percent of the men and 14 percent of the women died within a year of diagnosis.

"It is clear that a prophylactic approach is indicated and that the key to this is the early, vigorous and sustained control of hypertension.

"Elevated blood pressure, whether predominantly systolic or diastolic, in either sex, at any age, deserves attention." (p. 785)

10. TRUE. "Despite advances in nutrition and sanitation, infantile diarrhea remains a major problem in the United States. At the Cook County Pediatric Hospital, we admit approximately 1000 children each year for dehydrating diarrhea. Several thousand other children are treated in the outpatient clinic. Gordon has pointed out that the mortality from acute diarrhea has progressively declined in the United States over the past 70 years. There has also been a decreased incidence and a change in the seasonal prevalence: formerly termed 'summer diarrhea,' the disease now has its highest incidence in the winter.

"Many micro-organisms have been associated with acute diarrhea. Among the bacteria these include salmonella, shigella, enteropathogenic *Escherichia coli* (EPEC) and vibrios. Protozoa such as ameba and giardia and enteroviruses can also cause the acute symptoms. With this imposing list, it is surprising that a specific pathogen cannot be identified in as many as 80 percent of cases of acute diarrhea. The laboratory usually signs out the stool specimen as 'normal flora.'" (p. 791)

JAMA

October 2, 1972

11. FALSE. "In April, 1971 we published a paper describing 38 cases showing the clinical effects of marihuana on adolescents and young adults. With continued clinical investigation, we have seen an increasing number of symptomatic cases among preadolescents, adolescents, and young and older adults that have confirmed our original impressions and at the same time have led us to an increasing clinical conviction that there is a specific pathological organic response in the central nervous system (CNS) to cannabis products. This specific response was identified by a group of uniform symptoms common to all which seem unrelated to individual psychological predisposition. As we previously described, symptoms varied from



mild ego decompensation to psychotic states. We also considered that clinical findings resulting from chronic cannabis use were suggestive of a temporary toxic cerebral state on a biochemical basis. In a recent study, Campbell, et al have demonstrated cerebral atrophy by air encephalography in ten individuals who had smoked marihuana from three to eleven years. The radiological report parallels another one of our clinical impressions that cerebral structural changes may have occurred in some instances of intense chronic cannabis use." (p. 35)

EDITOR'S NOTE: The toxic effects disappeared within 3 to 24 months after cessation of drug use.

12. FALSE. "Human rabies resulting from bites of the spotted (*Spilogale putorius*) or striped (*Mephitis mephitis*) skunk has occurred sporadically in the United States since at least 1826. Epidemics of human rabies in Kansas in the period 1866 to 1876 and in Arizona in the period 1907 to 1910 were associated with epizootics of skunk rabies. In the past two decades rabies has become epizootic in skunks again, and skunk-associated human rabies is once more a problem in the United States and in Canada." (p. 44)

13. 23% "Of 2,334 medical patients surveyed from 1967 to 1968, 22.9% had received digitalis and 21.4% of digitalis courses resulted in intoxication. Risk factors included old age, impaired renal function, myocardial infarction, severe congestive heart failure, cor pulmonale, excessive doses based on body weight, and loading courses. An educational program in digitalis use with dosage guidelines for digoxin was established. In a repeat survey in 1969 to 1970, only 12.3% of 578 digitalis courses resulted in intoxication. The number of loading courses and the total amount of drug administered as a load were reduced. Fewer patients received a daily maintenance dose of digoxin greater than 2.5 $\mu$ g/lb. Deaths in intoxicated patients decreased. These results indicate that an educational program in digitalis use based on clinical pharmacological principles is a valuable addition to medical education." (p. 50—Abstract)

14. FALSE. "A common, and often perplexing, diagnostic challenge is the unfortunate person with recurrent abdominal pain. When a searching history, thorough physical examination, laboratory evaluation, and radiological studies are to no avail, such patients are often labeled neurotic, or advised to undergo exploratory surgery. It is in such a setting that the subject of abdominal epilepsy is occasionally raised. Since in our experience physicians know little about this rare entity, we feel a brief review is pertinent at this time.

"Experimental studies in both animal and human subjects have shown that stimulation of certain areas in the brain stem, hypothalamus, and cerebral cortex can influence gastrointestinal activity and cause a variety of visceral sensations. Up to 20% of patients with convulsive disorders, particularly those with temporal lobe seizures, will

experience a visceral aura such as epigastric distress, peculiar 'rising sensations,' nausea, vomiting, salivation, and borborygmi. Usually these symptoms are the aura heralding the occurrence of a major motor seizure. On occasion, however, these visceral symptoms may be the *only* sign of paroxysmal disturbance of cerebral electrical activity and, as such, have been labeled as convulsive equivalent states. An example of this is abdominal epilepsy." (p. 65)

October 9, 1972

15. TRUE. "Five infants, all less than 1 year of age, were killed by children 8 years old or younger. All five died from craniocerebral trauma resulting from assaults with a blunt instrument, being dropped to the floor, or both. Two had been bitten by their juvenile attackers. None of the victims showed any stigmata of adult 'battering' in the form of multiple, nonlethal metasynchronous trauma, and adult involvement in the fatal terminal episode was excluded by thorough police investigation. The delicacy of the soft and bony structures of the infant's head renders it vulnerable to mortal trauma at the hands of tiny assailants. The preschool child is capable of homicidal rage when he is provoked by what he considers to be a threat to his sense of social security in his family unit or immediate human environment." (p. 159—Abstract)

16. "The criteria for acceptability of cadaveric organs for homotransplantation have been altered and amended as clinical experience has accumulated. Original cadaver donors were persons dying suddenly from variable causes but usually under controlled situations such as during surgical operations. The inherent danger of transmitting occult pathological conditions from donor to recipient, however, necessitated a more discriminating evaluation of donors. Prompted by this, Couch, et al outlined principles for the use of cadaver tissues. He proposed that the following conditions would be basic contraindications for organ donation: (1) general bacterial sepsis, (2) positive serological reaction, (3) carrier status, such as infectious hepatitis, (4) disseminated cancer, (5) generalized atherosclerosis, (6) profound or prolonged shock, and (7) clinical or laboratory data indicating disease of the organ in question." (p. 164)

17. TRUE. "The potential of certain drugs to cause a syndrome resembling systemic lupus erythematosus requires that all physicians be cognizant of this complication. Hydralazine, procainamide, isoniazid, and certain anticonvulsants are the major offenders. This report documents a case of drug-induced lupus erythematosus in which pericardial tamponade was life-threatening.

"Drugs that cause lupus-like syndromes do so with different propensities. Alarcon-Segovia believes that procainamide is the strongest of lupus inducers." (p. 191)



October 16, 1972

18. FALSE. "Hidradenitis suppurativa, is a chronic, progressive disease of young people that creates serious morbidity. Recurrent painful nodules, abscesses, and in the chronic stage, hypertrophic scar tissue, draining sinuses, and contractures result in marked interference with employment and normal social activities. The disease is more appropriately called 'apocrinitis' since it involves the apocrine sweat glands of the axilla, groin, and perineum. All modes of therapy short of total excision of the apocrine-gland-bearing tissue is temporizing. Early recognition and excision of all involved glands will save patients the pain and social stigmata of this disease, and permit repair by relatively simple means." (p. 320)
19. FALSE. "Since weight reduction, the cornerstone of treatment in type IV hyperlipo-proteinemia, has poor patient acceptance, clofibrate (2 gm/day) was evaluated in a double-blind study prior to dietary therapy in 12 patients. Mean plasma triglyceride levels fell with clofibrate (429 mg/100 ml to 255 mg/100 ml) but not with placebo (565 mg/100 ml). In most patients, cholesterol levels were unchanged. Although clofibrate alone may be effective in certain type IV patients if both cholesterol and triglyceride levels are substantially reduced, it is no substitute for adequate dietary therapy." (p. 316—Abstract)

October 30, 1972

20. 1. Women; 2. Men. "The value of anticoagulant therapy after acute myocardial infarction has been assessed in 1,136 patients admitted to the Bronx Municipal Hospital Center. The treatment reduced the overall mortality in women from 31% to 15%, particularly those 55 years of age or over, with moderately severe infarction.
- "The low overall mortality in control men (16%) was not reduced with treatment, though there was significant reduction of the mortality in a subgroup of men with moderately severe infarction showing Q-wave evolution.
- "Age and sex, as well as the severity of the episode of acute myocardial infarction, are important in determining whether anticoagulant therapy is likely to be beneficial." (p. 541—Abstract)
- EDITOR'S NOTE: As you know, this study is different in its findings than any we can recall seeing recently.

#### ANNALS OF INTERNAL MEDICINE

October, 1972

21. TRUE. "The experience of adult patients admitted to a general hospital with the diagnosis of acute pulmonary edema was determined for the year before and the year after the opening of an intensive care unit. Comparisons made included hospital mortality, duration of hospitalization, and total hospital charges. Mortality was identical in both groups (8%) and was consistent with the overall hospital mortality for patients

admitted with this diagnosis during the preceding 4 years. The duration of hospitalization was 2.3 days longer, and the average hospital bill was 46% greater for patients admitted during the year after than for those admitted the year before the opening of an intensive care unit. The data suggest that the only significant change in the experience of patients hospitalized with acute pulmonary edema since the opening of a unit has been a marked increase in the cost of rendering care to these patients." (p. 501)

EDITOR'S NOTE: This was from the Department of Medicine, Strong Memorial Hospital and the Rochester School of Medicine and Dentistry.

22. FALSE. "Pleural effusions are classically divided into 'transudates' and 'exudates'. A transudate occurs when the mechanical factors influencing the formation or reabsorption of pleural fluid are altered. Increased plasma osmotic pressure or elevated systemic or pulmonary hydrostatic pressure are alterations that produce transudates. The pleural surfaces are thought not to be involved by the primary pathologic process. In contrast, an exudate results from inflammation or other disease of the pleural surface, such as occurs in tuberculosis, pneumonia with effusion, malignancy, pancreatitis, pulmonary infarction, or systemic lupus erythematosus." (p. 507)
23. FALSE. "A pleural-fluid protein level of 3.0 g/100 ml is frequently used to separate transudates from exudates; however, this dividing line has consistently led to the misclassification of many effusions. Carr and Power found that 8% of their exudates and 15% of their transudates were misclassified by this criterion. Recently, Chandrasekhar and colleagues have proposed that the absolute level of the pleural-fluid lactic dehydrogenase (LDH) can separate transudates from exudates more effectively than the pleural-fluid protein level." (p. 507)
24. Exudate. "In the evaluation of a pleural effusion, its classification as either a transudate or an exudate is the first diagnostic step. If an exudative effusion is present, further diagnostic procedures are imperative, such as cytopathology, pleural biopsy, and sometimes even thoracotomy, so that a definitive diagnosis can be made and specific therapy for the pleural disease may be instituted. On the other hand, if the fluid is clearly a transudate, one need not worry about therapeutic maneuvers directed at the pleura and need treat only the congestive heart failure, nephrosis, cirrhosis, or hypoproteinemia." (p. 509)
- EDITOR'S NOTE: If you are interested in LDH separation of transudates and exudates, we feel you should read the entire paper. It begins on page 507.
25. TRUE. "Mitochondrial antibody was detected in the serum in 84% of 188 patients with primary biliary cirrhosis, 11% of 77 with chronic active hepatitis, 6% of 33 with cryptogenic cirrhosis,



and 0.8% of 1,328 with other diseases involving liver, biliary tract, or collagen but in none of 332 with acute or chronic viral hepatitis." (p. 533)

26. FALSE. "The test for mitochondrial antibody proved to be a remarkably accurate method for confirming the diagnosis of primary biliary cirrhosis. Although the test was positive in 20 (1%) of our 1,508 patients with other disease, it led to few diagnostic errors.

"Tests for mitochondrial antibody were particularly helpful in establishing the diagnosis of primary biliary cirrhosis in patients with typical or consistent biopsy findings but with atypical clinical or laboratory features, such as the absence of pruritus, hypercholesterolemia, or both. It is noteworthy that the incidence of mitochondrial antibody in such cases was as high as that in patients with typical features." (p. 540)

27. TRUE. "Thyroid hormone treatment for patients with myxedema coma has generally been unsatisfactory, resulting in a high mortality rate. This is partially owing to the difficulty of making controlled prospective observations on the metabolic responses to the administration of various doses of thyroid hormone in such critically ill patients." (p. 549)

28. Lower. "The commonest and most consistent effect of thiazide diuretics on calcium metabolism is a sustained fall in urinary calcium excretion. During the first few days of treatment, sodium and water depletion result in concentration of plasma proteins and a rise in protein-bound and total plasma calcium, but values corrected for protein usually show no change. In a few patients there is a genuine rise in plasma calcium, unrelated to plasma protein changes. This has resulted in most cases in worsening of preexisting hypercalcemia, especially in primary hyperparathyroidism. Thiazide challenge has been proposed as a diagnostic test in patients with borderline plasma calcium values in whom primary hyperparathyroidism is suspected, but the need for and value of such a test are still uncertain." (p. 557)

29. FALSE. "It is clear that thiazide diuretic administration can lead to hypercalcemia in hypoparathyroid patients treated with vitamin D. A significant rise in plasma calcium levels occurred in six of seven patients given a thiazide experimentally, and hypercalcemic levels were reached in three; this report adds another five cases of hypercalcemia in patients treated with a thiazide. The results are especially significant because in this series, in contrast to all others reported, hypercalcemia has occurred rarely, and its cause has always been identified.

"This effect of thiazide treatment seems to be unrelated to dose, since the patients in the experi-

mental group were given four tablets daily (2.0 g of chlorothiazide or 20 mg of methyclothiazide) and those in the therapeutic group only one tablet daily (5.0 mg of bendrofluazide or methyclothiazide). In one patient included in both groups the plasma calcium level rose more with the lower dose than with the higher.

"Some patients appear to need less vitamin D after recovery from an episode of vitamin D intoxication because previous overdosage was unrecognized. In Case 8 there would still have been substantial body stores of vitamin D at the time that bendrofluazide was given but, even so, the dose of vitamin D restarted 2 weeks earlier was too small to have any effect on the plasma calcium level. The patient was confined to bed, but hypercalcemia had not occurred during many previous hospital admissions, when only mercurial diuretics were given." (p. 581)

30. TRUE. "The nephrotic syndrome, with morphologic features of normal or near-normal glomeruli by light microscopy but showing a lack of immune deposits along the glomerular basement membrane (GBM) by immunofluorescent and electron microscopy, is a well-recognized clinical entity that has been variously termed 'lipoid nephrosis,' 'nil lesion,' 'idiopathic,' or 'minimal change' nephrotic syndrome. Although most patients with this entity respond to adrenal steroid therapy with cessation of proteinuria, some do not. The urine of these patients with 'steroid-resistant nephrotic syndrome' never becomes protein-free, and progression of this disease to renal failure has been recorded." (p. 581)

31. Increase. "Nine normal subjects were given 50 mg of hydrochlorothiazide twice daily for 25 days, to investigate the relationships between circulating immunoreactive parathyroid hormone (iPTH) and changes in calcium homeostasis induced by this diuretic. Total and ionized plasma calcium concentrations were significantly increased during administration of hydrochlorothiazide and for at least 2 weeks after withdrawal of the drug. There was no clearly definable effect either on protein binding of calcium or on iPTH. The normal negative correlation between ionized calcium and iPTH appeared to remain intact, and the mechanism of the increase in serum calcium is yet to be elucidated." (p. 587)

32. TRUE. "Toxic systemic extracardiac effects of quinidine that have thus far been recognized include fever, nausea, vomiting, diarrhea, abdominal cramps, tinnitus, deafness, headache, diplopia, hypotension, colored vision, and purpura. A toxic effect of quinidine on the liver which was observed in a patient under treatment for ventricular premature contractions, is described." (p. 595)



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Bibliographic references should not exceed twenty in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as, —Alais, FG: What is Known About it, J. Tennessee M. A., 35:132, 1950.

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If reprints are wanted, the desired number should be indicated in the letter accompanying the manuscript. No reprints are provided free and a reprint cost schedule will be forwarded upon request.



## *The Intensive Care Nursery: Past, Present & Future<sup>†</sup>*

HENRY S. CHRISTIAN, M.D.,\* THOMAS E. LESTER, M.D.\*\* AND ALEX RUTH, M.D.\*\*\*

The Intensive Care Nursery (ICN), University of Tennessee Memorial Research Center and Hospital, Knoxville, Tennessee has been in operation since August, 1970. It receives patients from east Tennessee, serving mainly the mid-east and upper-east sections. Patients are also referred from middle Tennessee, upper Georgia, upper Alabama, Kentucky, Virginia, and North Carolina.

The 25 incubator intensive care unit, including the intermediate care area, has proved to be entirely too small to take care of the tremendous growth which has been experienced, and plans are now being formulated to expand to an approximate 50-bed area. The intensive care nursery receives only infants who are ill or in distress from various causes peculiar to the newborn, including extreme prematurity. The normal newborn infants, including the pre-matures who are not in distress, are cared for in another area and are not included in this program.

The more common difficulties encountered are Respiratory Distress Syndrome, Hyaline Membrane Disease, Meconium Aspiration, Bronchopneumonia, Sepsis, Congenital Heart Disease, Gastrointestinal Tract Anomalies, etc.

In the process of developing the intensive care

unit, during which time the need for such a unit was even more obvious than previously, it became mandatory that a system of transporting the infant into the ICN be developed. In the beginning, a Volkswagen bus was adapted to transport a portable isolette (Air-Shields). Two pediatricians from the University of Tennessee Memorial Research Center and Hospital made trips to various outlying hospitals within a radius of approximately 150 miles to pick up patients. The portable incubator supplied heat, moisture and oxygen to the baby in transit, guaranteeing that it would arrive at the ICN in the best possible condition.

It very soon became apparent that this was not sufficient to meet the demands. Twelve portable isolettes (Air-Shields) were then purchased and stationed in various hospitals over the area. These were kept in readiness at all times with a full tank of oxygen in place and a constant temperature maintained by connecting to a wall outlet. The distressed infant was immediately placed in the incubator and transported to the ICN by means of an ambulance from the area involved. This saved one-half of a round trip, thereby saving time which was most critical.

Nurses, physicians, and ambulance attendants were trained by the ICN physicians and nursing staffs to care for the baby in transit. It was stressed that a patient would never be transported without personnel in attendance trained in routine care, maintenance of adequate heat and oxygen, suctioning, administration of artificial respiration, and cardiac resuscitation (thus far, no patient has been lost in transit or afterwards from faulty technique during transport).

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As the program developed, instances were encountered in which more rapid transport and transportation from less accessible areas was needed. Thus, helicopter transportation was initiated, which has proven to be most efficacious and advantageous in certain situations. There are indications for the use of each of the three methods of transportation, and much of the success which the ICN has shown is attributable to these.

The previously mentioned training program was necessary to train not only the nurses and ambulance attendants, but also physicians, hospital administrators, hospital personnel and the general public. This was done by means of one-day in-service training programs within the intensive care unit, one-day workshops, teleconferences, lectures to medical societies, nurses groups, professional clubs, social and service clubs, etc. This program was intended to portray the availability of the ICN facilities, to alert everyone concerning the danger signs and symptoms, what to look for, when to transfer, and what patients needed the ICN facilities.

In order to aid the smaller hospitals and clinics in upgrading their equipment, techniques, and facilities, teams of nurses and physicians made visits to these areas upon request. Suggestions were offered, and at times help in purchasing equipment could be given.

A 24-hour telephone consultation service was made available, which has proven most helpful. The telephone number of the ICN was placed in every nursery, clinic, hospital and physician office in the area, and there is always a nurse or physician on call who is able to answer questions concerning transportation, consultations, etc.

Table I gives a statistical summary of the admissions since the beginning of the program in August 1970, as well as a summary of the patients during 1972 and during January 1973.

There is a total survival rate of 78.2%. This includes patients with conditions incompatible with life—absence of kidneys, various monstrosities, non-functioning heart, agenesis of the lungs, anencephalics, etc. The survival rate when these patients are excluded is 89.2%.

The majority of the patients were admitted with pulmonary difficulties, Hyaline Membrane Disease, Atelectasis, Bronchopneumonia, etc. These were a total of 539 with a survival rate of 89.5%.

The various methods of transportation

TABLE I

	Jan. '73	Total 1972	Since Aug. '70
Admissions			
Total	42	394	853
Deaths	6	80	186
% Survival	85.7	79.8	78.2
Incompatible	2	31	94
% Survival less Incom.	95.0	87.5	89.2
Respiratory Distress			
Total	23	245	539
Survived	22	207	480
% Survived	95.6	84.5	89.5
Congenital Heart Disease			
Total	0	21	75
Survived		13	50
Operated	0	0	14
Survived			10
Surgical			
Total	1	16	23
Survived	0	14	19
Transported			
Total	32	266	596
U.T. Isolette	15	159	472
Local Isolette	13	80	93
Helicopter	4	27	31

brought in 596 of the 853 cases since the program was initiated. The incubator based at the University of Tennessee Memorial Research Center and Hospital has been responsible for transporting the majority of patients since it has been in operation the longest. The "local" incubator (those based at the outlying hospitals) transported 93, and the latest mode of transportation, the helicopter, 31. It is interesting that the survival rates for the transported patients and those born in the obstetrical department of the University of Tennessee Memorial Research Center and Hospital are identical, suggesting that the transport facilities are adequate and effective.

The successes of the intensive care nursery are gradually evolving into and becoming a part of a new concept—Perinatology. The field of Perinatology is concerned with all conditions surrounding birth, which includes the newly-born infant. In addition, it includes the prospective mother's welfare even before conception, as it is related to pregnancy and birth, and to the welfare of the fetus, particularly just before and during delivery. The implications of this new concept upon intensive care of the neonate are tremendous, particularly as regards transporting of the patient. Obviously, the best time for transportation of the infant is in utero; there-



fore, it becomes necessary to transport the pregnant woman when difficulty is anticipated, so that delivery may be accomplished next door to the intensive care nursery.

In the field of Perinatology, which now includes Neonatology, there are many aspects which need developing, refinements to be made, and new avenues to be explored—just so many challenges. The concept of a place where care can be given intensively to the neonate has been one of the greatest recent advancements in the field of Pediatrics and medicine in general. The concept of Perinatology now opens up possibilities of which we could only speculate in the past.

One of the greatest needs at the present time relates to follow-up studies. The large number of patients affords tremendous opportunities for evaluating the efforts and procedures as well as benefitting the patient. Repeated examinations at regular intervals by the pediatrician, audiologist, ophthalmologist, psychologist, speech technician, social worker, etc. are necessary to have a complete and well-rounded program.

Since so many of the patients admitted to the ICN have respiratory problems, considerable work has been done at the University of Tennessee Memorial Research Center and Hospital in pulmonary physiology, particularly regarding the use of positive pressure, and recently negative pressure, in the management of Hyaline Membrane Disease.

Positive pressure is administered through an endotracheal tube, or by means of an airtight hood or box over the head which is tightly sealed about the neck. The equipment used is constructed in such a manner that a constant pressure can be maintained at any desired level and a safety feature is incorporated to ensure that under usual conditions there is little possibility of pneumothorax. The positive pressure keeps the alveoli open in the absence of surfactant until the lungs can supply this phospholipid, which is present normally and which coats the inside of each alveolus, thereby keeping it inflated.

Negative pressure is administered in the same general manner as with the "iron lung," which was used in cases of bulbar poliomyelitis. This can be applied either constantly, which tends to keep the chest in an inspiratory position, or intermittently which acts as a negative pressure respirator. The staff at the University of Ten-

nessee Memorial Research Center and Hospital have become quite enthusiastic in the use of negative pressure because this avoids prolonged use of an endotracheal tube. The results are most encouraging and agree with those from other intensive care units.

Recently the record of every patient discharged from the unit has been logged into a computer. All information concerning the patient, including history, physical examination, laboratory findings, diagnosis, disposition, etc. is entered. It is felt that this has been a most important addition to the ICN routine, because now we can evaluate our procedures, methods, and practices. Already we have made changes in the techniques because of statistical results supplied by the computer.

As is always true, today's newer methods become obsolete and are replaced tomorrow. There are so many areas that need to be explored. There are many problems such as (1) what can be done about immaturity (baby weighing less than 800 gms.), (2) what can we do for intracranial hemorrhages and how can they be prevented, etc.

There can be two methods of evaluating the effectiveness of an intensive care nursery: (1) follow-up studies to determine mental and physical capabilities of the individual, and (2) determination of the actual changes in mortality rates.

The program at the University of Tennessee Memorial Research Center and Hospital has not been in operation long enough to completely evaluate the survivors. This will be reported at a later date. The studies thus far, assuming the patient was in good condition at the time of admission and not already damaged by anoxia, traumatic delivery, grossly subnormal temperatures, etc., indicate that the individual can be expected to be normal.

It is a simple matter to assess the program by examination of neonatal mortality rates. Table II reveals a comparison of the rate in infants born in the obstetrical department of the University of Tennessee Memorial Research Center and Hospital for a two year period, July 1965 to June 1967, with the rate of infants born during the first year the intensive care unit was in operation, August 1, 1970 to July 31, 1971. The neonatal mortality was decreased from 21 to 8.8 per thousand. Table III shows the mortality rates for Knox County as compiled by the



TABLE II

Date	Total Deliveries	Neonatal Deaths	Neonatal Mortality Rate
		U.T.M.R.C.H.	U.T.M.R.C.H.
July, 1965- June, 1967	2040	41	2.1 % (21 per 1000)
Aug. 1, 1970- July 31, 1971	1688	15	0.88 % (8.8 per 1000)

TABLE III

Age Group	1967		1968			
	No.	Rate	No.	Rate		
Under 28 days	60	13.7	71	16.9		
Total deaths under 1 year	85	19.4	94	22.3		
Age Group	1969		1970		1971	
	No.	Rate	No.	Rate	No.	Rate
Under 28 days	60	13.2	59	12.9	36	7.8
Total deaths under 1 year	84	18.4	80	17.5	55	12.0

Knox County Health Department for the years 1967 through 1971. There is a slight decrease in 1970 in both the neonatal and infant mortality rates (ICN only in operation 5 months); how-

ever, in 1971 there is a significant decrease to 7.8 and 12.0 respectively.

**CONCLUSION:** The concept of intensive care for the neonate is relatively new and has been widely accepted. The impact upon the neonatal mortality rate has been tremendous. We are now having the lowest rates in the history of our country. There seems little doubt that the incidence of cerebral palsy, brain damage, and other results of insufficient oxygen to tissues will be greatly reduced. This means that rather than an individual becoming a burden and economic drain upon society, he will be an economically productive tax paying citizen. The need for early recognition of the neonate in distress and early institution of therapeutic measures, either in the newborn nursery or in the intensive care nursery, cannot be stressed too much. The intensive care nursery is an expensive venture if it is to be successful. The cost of adequately trained personnel and the necessary equipment prohibit every hospital from supporting an intensive care unit. This means that the ICN is to be found in the larger medical centers and must afford care for larger areas and regions.

\* \* \*

## SAINT ALBANS PSYCHIATRIC HOSPITAL

Radford, Virginia

### STAFF:

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# *Treatment of Uncomplicated Gonorrhea By Use of Two Grams of Ampicillin and Two Grams of Probenecid*

FRANK L. ROBERTS, M.D., DR. P.H.\*

There has never been a great biography of gonorrhea. Typhus fever, yellow fever, cholera and smallpox have had their biographies but not the humble gonococcus. Gonorrhea is not a dramatic disease—its habitat is unmentionable, it is a disreputable disease and until relatively recently was associated with whores, whore-mongers and generally disreputable companions. It was associated with poverty and ignorance and although it infected many wealthy and “upper class” persons of both sexes its presence in the latter group was vigorously denied.

However, as of now gonorrhea is no longer “publicly unspeakable and medically outcast limping through the years a veritable nobody’s child” (Pelouse). Gonorrhea is no longer a “No, no” word. It is freely used in bars and salons—by the poor and by the rich—it is everybody’s child.

In its quiet unassuming way, gonorrhea has plodded through the centuries, still misnamed as a flow of seed and doing untold damage. It has infected millions; it has blinded and crippled untold thousands. It is not a dramatic disease. It does not rage through countries and cities slaying thousands; it has aroused no panic in the hearts of citizens. In fact, it has been referred to contemptuously as “no worse than a bad cold.”

There are several truths about gonorrhea, some of which have been forgotten by the older generation of physicians and some never thought of by the younger generation.

1. Untreated gonorrhea will *not* cause strictures. Strictures were caused by the witch method of treatment used prior to the sulfa drugs.
2. Gonorrhea is a self-limited disease; if untreated and the patient follows the rules of hygiene the disease will cure itself. This happened to four of the 14 study patients whom we were investigating as gonorrhea

carriers. If gonorrhea were not self-limited, we would have had millions of cases in the United States prior to the introduction of sulfa drugs. There were many thousands of cases of gonorrhea in the United States prior to the use of the sulfa drugs. The treatment used during this period had absolutely no curative ability and probably was deleterious. So with no adequate therapy thousands of men recovered from gonorrhea and went on to raise healthy families. Many of the “frailties of women for which Lydia Pinkhams’ Tonic was the cure resulted from asymptomatic gonorrhea contracted from carrier husbands.

3. There is not a whit of evidence that trauma to the urethra will cure gonorrhea.
4. The disease is spread by human behavior and therefore cannot be controlled without a complete reversal of man’s sexual practices—a phenomenon which might be possible but is highly improbable.
5. No disease has ever been eradicated by treatment of cases.
6. A vaccine may be developed. If there is a successful vaccine for any disease in which the disease gives no immunity, I do not know of it, and I have seen in over 50 years of experience with gonorrhea no evidence of immunity by an attack of the disease.
7. If any control at all can be instituted, it is going to be in the form of a cheap, readily available vaginal insert which will be gonococcocidal and spermaticidal. If the spirochete could be killed also that would be an added advantage.
8. The use of a condom offers 100 percent protection if used properly. Almost invariably there is some preliminary skirmishing before the condom is put on and so the battle is lost.

Many papers have been written and many

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drug regimens proposed for the treatment of gonorrhea. This paper proposes to show that a total of two grams of ampicillin and two grams of probenecid given in two equal doses (1 gram ampicillin and 1 gram probenecid p.o. stat repeated in 8-12 hours) will give cure rates slightly higher than 4.8 million units of aqueous penicillin G i.m.

Some of these data have been published before but under different criteria. There are here, also some additional data.

Each person treated was diagnosed by culture and for test of cure cervical and rectal cultures were taken from women and urethral cultures from below the fossa navicularis in men. An arbitrary period of ten days was set for return for test of cure when penicillin or ampicillin was used but 13-14 days (ten days *after* completion of treatment) for those patients taking drugs over a period of three to four days. Ten days in our clinic clientele is a dangerously long time to wait between treatment and test of cure because reinfection becomes very important. I think that 24 hours and certainly not more than 48 hours should be used. We hope soon to have enough data from infected quarantined

prostitutes to answer the question of treatment failure versus reinfection.

It is highly probable that two grams of ampicillin will not cure incubating syphilis but a review of more than a thousand records of gonorrhea cases (not treated with penicillin) found no cases of syphilis. Syphilis, of course, is more difficult to acquire than is gonorrhea and I feel that the problem of incubating syphilis is not one of overwhelming significance. The problem of male carriers of gonorrhea is much more important than is the possibility of acquiring syphilis with gonorrhea.

From the examination of 314 male contacts to known gonorrheally infected women, the attack rate is about 33.0 percent. The probability of getting syphilis from a known syphilitic is not known but is certainly lower than that of acquiring gonorrhea. If we assume a 20 percent probability of acquiring syphilis and our 33 percent for gonorrhea the probability of acquiring both is  $.33 \times .20$  or .0066—or six in a thousand. We have not seen even one in a thousand. So the risk, in our opinion, is not very great.

It would appear that when the curative dose

TABLE I.  
*Results of treatment of 1156 proved gonorrhea cases by various treatment regimens.*

<i>Drug Regimen</i>	<i>Number Treated</i>	<i>Number Treatment Failures</i>	<i>Percent of Failure Rates</i>	<i>S. E. of Failure Rate</i>
2 GM Ampicillin 2 GM Probenecid 2 Equal Doses, 8 hrs apart. P.O.	260	9	3.46%	1.13%
4.8 Million Units Aqueous Procaine Penicillin G. IM One Session	596	35	5.87%	0.96%
9 GM Tetracycline 2 Gm Stat—7 Gm Dispensed 2 Gm/Day for 3½ Days	151	13	8.61%	2.28%
900 Mg Doxycycline 300 Mg Stat.—600 Mg Dispensed for 300 Mg day for 2 Days	159	17	10.69%	2.44%
Total	1156	74	6.4%	0.72%

There were 68 colored men who returned for test-of-cure after being treated with doxycycline and the failure rate was 14.7% (10 out of 68). For women treated with doxycycline the failure rate was only 7.7%. On account of the small numbers no significant difference can be demonstrated.

The failure rates of 47 colored males and 104 colored females treated with tetracycline were 8.65% and 8.05% respectively.

As is seen only 161 colored males and 5 white males returned for test of cure—11.5% and less than ½ of one percent respectively.



of any drug is only one-eighth of what it was 30 years ago it is about time to look for a substitute. We think that ampicillin is the answer for a while at least—but no doubt the adaptable little gonococcus will, in time, defeat ampicillin as it has defeated the sulfa drugs and is defeating penicillin.

Table I shows the results of the various regimens of treatment of proved cases of gonorrhea. The treatment failure rate with the ampicillin and probenecid was 3.46 percent and 5.87 percent with a 4.8 million units of aqueous procaine penicillin G. The difference is not statistically significant—the critical ratio is 1.63 and p. 22. Between the ampicillin group and the tetracycline group the CR is 2.03 and  $p < .05$ . So the difference is significant at the five percent level. Between the ampicillin group and the doxycycline group the CR is 2.67 and  $p < .01$ . Thus,

in this sample of 1156 individuals the failure rate of those treated with ampicillin (2 gms) was significantly lower than the failure rate of the tetracycline and doxycycline group.

In those allergic to penicillin, we are forced to rely, in clinic practice, on the tetracyclines. There was no significant differences between the tetracycline group and the doxycycline group—the C.R. was 0.66 and p was greater than 0.25.

Presently we are trying 3.5 gms of ampicillin and 1 gm of probenecid p.o. stat. A priori it should give at least as good results as do two grams.

Ampicillin one gram and probenecid 1 gram orally stat and repeated 8 to 12 hours later give cure rates slightly better than 4.8 million units of aqueous procaine penicillin G. It is well tolerated by patients and avoids the use of a needle—an added attraction to the patient.

\* \* \*

# VA HOSPITAL MURFREESBORO, TENNESSEE

Has openings for staff physicians. The hospital has 500 psychiatric and 566 medical beds and a 48-bed Nursing Home Care Unit. Complete staff of Allied Medical Services includes laboratory, radiology, social work, psychology, etc. Scheduled tour of duty 40 hours per week; 30 days annual leave and 15 days sick leave per year. Liberal health and life insurance benefits. Salary depends on qualifications but ranges from \$24,628 to \$30,018. Current license and registration in a State, Territory, or Commonwealth of the United States or District of Columbia, required. Nondiscrimination in employment.

Community of Murfreesboro has a population of approximately 30,000 and is located 30 miles south of Nashville in beautiful Middle Tennessee. Middle Tennessee State University and two new high schools add to the appeal of the community. Nearby medical school provides opportunity for continuing professional education. Abundant outdoor recreational activities.

If interested, write Dr. John T. Mason, Hospital Director, VA Hospital, Murfreesboro, Tennessee 37130 or call collect telephone number 615-893-1360, Ext. 365. All inquiries kept in strict confidence. Preemployment interview and moving expenses paid.



# *A Report from the Tennessee Cancer Registry*

CHARLES C. TRABUE, IV, M.D.\*

The Tennessee Cancer Registry has been in operation since late 1969 as a central computerized cancer registry serving the hospitals of Middle and East Tennessee. Originally the participating hospitals were those that had pre-existing hospital registries. At the end of 1971 there were nine such participating large hospitals. In 1972, with increased funding and a full-time director, the registry increased its activities, and at the end of the year was serving 27 large hospitals, having more than 9,000 cancer records on its computerized listings. One of the principal objectives of the registry is to encourage an annual follow-up examination (and report) on all cancer patients for the remainder of their lives. This effort has been at least partially successful as the reports reveal a 66% follow-up record in January, 1972, being increased to 92% at the end of the year. The various cancer registry secretaries are very conscientious and competitive and make every effort not to lose a case from follow-up. Some of the largest hospital registries have now attained an almost perfect record.

The purpose of this report is not to reveal any new or startling data, but rather to give a superficial overview of the sorts of information assembled in the registry data bank. Obviously, five year follow-up survival data will not be available until the registry has been in existence for five years, and just as obviously the registry cannot serve as a statewide epidemiological resource until it is receiving data from large and small hospitals throughout the state. Such objectives could not have been reached until after the feasibility of the methodology had been established on a more moderate scale. Such feasibility has now been firmly proven and we look forward to a rapid geographic broadening of the coverage offered.

Every effort is made both by the hospital registrars and by the central registry staff to ensure the accuracy of all data entered in the

data bank. Those diagnoses which are not microscopically confirmed comprise five per cent of the total cases. These unconfirmed cases are easily eliminated from any specific study analysis.

Table I simply shows, by decades, the age of all patients at time of diagnosis.

TABLE 1  
"AGE AT DIAGNOSIS . . . % BY DECADES"

0-10		1.0%
10-20		1.5
20-30		4.8
30-40		7.6
40-50		13.1
50-60		21.8
60-70		26.2
70-80		17.5
80-90		5.7
91 +		0.8

Table II shows the percentage within each of the eleven leading sites of the methods used in the treatment of cancers of each of these sites. A perusal of these gross figures by oncologists may indicate that the ideal choice of treatments is not being reached by the physicians of Tennessee. For instance, 118% surgical treatments for melanoma is an expression of 263 surgical procedures in the 223 melanomata treated. Treatments repeated within a three months period are not counted as repeats. If we assume that each patient had one surgical procedure, we see that the primary surgery was not successful in forty of the patients. Does this

\* Director of the Cancer Education and Tennessee Central Cancer Registry. Supported by funds through Tennessee/Mid-South Regional Medical Program.



TABLE 2

"TREATMENT METHODS USED IN ELEVEN MOST FREQUENT SITES (EXCLUDING SKIN)  
... EXPRESSED AS A PERCENTAGE OF CASES FOR WHICH TREATMENT USED BY SITES"

	Surgery	Radiation	Chemotherapy	Hormones
Lymphoma-Leukemia	13	31	47	23
Large Intestine	86	4	12	0
Rectum	87	13	9	0
Breast	95	42	11	11
Cervix	73	42	2	1
Uterus	70	66	4	2
Ovary	69	35	42	2
Prostate	77	12	2	64
Bladder	98	26	5	2
Melanoma	118	4	17	1
Entire Group	53	27	10	9

TABLE 3  
PERCENTAGE OF SURVIVORS BY STAGE AND SITE

Site	In Situ	Local	Regional	Distant	Unknown	Total At Risk	Total Alive	% Alive
Lymphomas	0	0	0	67	0	499	333	67
Leukemias	0	0	0	52	0	254	133	52
Mouth & Pharynx	67	86	65	36	77	422	321	76
Stomach	0	64	40	13	15	154	50	32
L. Intestine	78	76	58	32	41	589	338	57
Rectum	100	83	59	37	65	245	160	65
Pancreas	0	21	29	10	18	179	34	19
Larynx	100	96	71	66	76	193	162	84
Lung	33	54	44	23	42	1079	423	39
Breast	100	90	78	45	66	1065	822	77.1
Ovary	0	90	54	22	54	226	121	53.5
Cervix	98	87	62	22	59	1089	922	84.6
Uterus	100	92	68	56	83	314	267	85.0
Prostate	100	84	62	55	57	577	408	70.7
Bladder	100	81	59	23	81	279	204	73.1
Kidney	0	84	65	20	50	168	99	58.9
Brain	100	54	50	50	52	196	106	54.1
Melanoma	0	88	62	29	73	223	162	72.6
Skin	100	93	81	33	80	498	458	91.9
Unknown	0	0	63	28	25	330	101	30.6
All Others	92	77	54	30	55	667	410	61.4
Total	97.0	82.8	59.4	40.4	56.0	9246	6034	65.2
% by stage	7	35	26	25	7	100%		



indicate an insufficiently high index of suspicion in making the diagnosis or a lack of boldness of the surgeon in choosing his primary operation? Should more than 35% of patients with ovarian cancer be given the benefits of radiation therapy? And should hormone therapy be given to more than eleven per cent of breast cancer and 64% of prostate cancer patients? Treatment choices vary greatly from hospital to hospital. Such figures are available from the registry on request of local physicians who would use them constructively for hospital conferences and self evaluation.

Table III contains so many figures that it will doubtless be ignored by all except the most determined readers. No attempt is made here to show length of survival, but such tables are available on request for each site. Once again the table does emphasize the well-known truth that survival in cancer depends largely on early diagnosis. The staging system used in a large central registry must be basically simple in order to be accurate. In situ cancers are diagnosed only on microscopic evidence. The local stage indicates no extension beyond the organ of origin to regional nodes, tissues or organs. The distant stage includes those cases with blood or lymph borne metastases to distant organs. Leukemias, most lymphomas and carcinomatoses are placed in this category.

The unknown classification indicates an uncertainty on the part of the attending physician of the extent of spread. The line showing the totals for the registry indicates a survival rate of 65.2% for the 9246 cases and rates ranging

from 97% survival of the in situ cases to 40.4% of those with distant metastases. Quite obviously the greatest key to survival from cancer lies in early diagnosis. The bottom line of the table shows that more than half of the cases are now in the regional or distant stage at the time of first diagnosis. All scientists concerned in cancer study hope to see the day when better lay education, improved methods of early diagnosis and an increased index of suspicion on the part of practitioners will lead to a decrease of this figure.

The Tennessee Cancer Registry has had its principal financial support from the Tennessee/Mid-South Regional Medical Program. There has been great cooperation from many other organizations, principally the Tennessee Division of the American Cancer Society, the Tennessee Department of Public Health, and the American College of Surgeons. And, of course, it would not exist at all without the continuous cooperation of the 27 hospitals that participate by submission of their records. At this point of time, the future existence of RMP is uncertain. However, the Director of the program is convinced, and greatly encouraged by the testimony of others, of the real worth of the registry to stimulate the all important follow-up exams and to serve as a resource for cancer education of professionals concerned in cancer care. It is now believed that other sources of permanent funding will be available if and when necessary. As soon as this problem is settled favorably, the services of the registry will be offered throughout the state on a much broader scope.

\* \* \*

## Sunscreens

The ideal Sunscreen should protect against light rays of wavelengths between 2900 and 4250 Angstroms. These include short ultraviolet "sunburning" rays (2900-3200 A), long ultraviolet rays (3200-4000 A), and near visible rays (4000-4250 A). Long ultraviolet and near visible rays not only enhance sunburn and certain inherited photosensitivity diseases, but are the primary activating rays in most acquired photosensitivity diseases.

The sunscreen that presently seems most effective for protection against short ultraviolet light is a mixture of para-aminobenzoic acid

(PABA) and alcohol. It gives a sustained high degree of protection and is non-toxic, stable, and cosmetically elegant. Other popular commercial agents either fail to provide significant protection or cause undesirable toxic effects.

Protection against long ultraviolet and near visible rays requires use of broader range sunscreens such as benzophenone, red veterinary petrolatum, titanium oxide or zinc oxide. However, repeated frequent application of these agents is necessary for sustained protection.

Isaac Willis, M.D.

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# Medical Staffs Merge— Improve Quality, Reduce Costs<sup>†</sup>

WILLIAM M. M. ROBINSON, M.D.\*

*Editor's Note: The following pages constitutes in essence Dr. Robinson's remarks made at the series of seminars on PAS/MAP sponsored by TMA in November and December, 1972 (See editorial, p. 467 of this issue of the JOURNAL).*

The past 15 years have produced a variety of changes touching the professional lives and interests of physicians. They have witnessed the gestation and birth of neighborhood health centers, Regional Medical Programs, Medicare and Medicaid, and various forms of specialized care. The activities of government health care agencies also have received much professional circumspection.

A revolution of sorts has taken place within medicine itself as members of the profession have begun to question the effectiveness of such processes as peer and utilization review. Neither are physicians entirely comfortable with the presumption that a "continuing education plan" should become an integral part of physician recertification. Many will continue to challenge assertions that "quality of care" and "performance" are in some fashion related merely to attendance at a prescribed number of "approved" meetings.

Undoubtedly, the future will hold the adoption of some form of national health insurance and the next five years irrevocably and inevitably will bring more and more health benefits to more and more people. However, regardless of the rapidity with which hospital and medical practice are changing, certain basic tenets, including the following, are likely to remain unchanged:

- Sick people are distressed whenever they are unable to receive high-quality care.
- Physicians become physicians to provide

sick people with high-quality care.

- Physicians value and wish to preserve their ability to be independent or self-employed, a state they view as a fundamental right.

- Voluntary, not-for-profit hospitals, which house approximately 70 per cent of all patients confined with acute illness, value their independent status.

- Hospitals have no reason to exist except to provide the mechanisms through which sick people may receive care.

- The increase in the quantity of benefits available to the health care consumer has been, and will continue to be, accompanied by increased concern with quality control; the degree to which this concern yields results is directly proportional to the operational effectiveness of hospitals, and the organizational effectiveness of their medical staffs.

In attempting to provide high-quality care to their patients, two neighboring institutions—Porter Memorial Hospital, Denver, and Swedish Medical Center, Englewood, Colo.—realized about four years ago that economies in operation could result if those energies previously expended in outmaneuvering each other could be diverted into mutual planning. Provided the existence of a genuine commitment to high-quality care on the part of the hospitals and their medical staffs, it was believed that services could be combined to community advantage with improved quality at reduced cost.

So it was that in September 1971, Swedish Medical Center closed its pediatrics unit following its medical staff's pledge to support the pediatrics unit at Porter Memorial Hospital. And so it was that on Sept. 8, 1972, Porter Memorial Hospital closed its "traditional" obstetrical unit with complete assurance to the community that its obstetrical patients would receive still better care in a "combined" obstetrical service at Swedish Medical Center.

Reliable, ongoing statistical evaluation of the

<sup>†</sup> Reprinted by permission from the American Hospital Association's publications *Hospital Medical Staff*, Feb., 1973, and *Hospitals, J.A.H.A.*, Feb. 16, 1973.

\* Director of medical affairs at Porter Memorial Hospital, Denver, and at Swedish Medical Center, Englewood, Colo.



impact of the pediatrics "shift" supports the contention that the effects of such moves are predictable; the vacuum apparent at the donor site immediately following moving day soon yielded to a homeostatic increase in other, non-pediatric, activity. Similarly, while there was no question that the shift of the obstetrics unit would produce a temporary disequilibrium, there was little doubt that natural events soon would restore the equation.

It already is quite obvious that two quarter-million dollar "loss-leaders"—the two pediatrics units—when combined into a single, first-class unit, have generated patient volume capable of providing the skills and morale essential to high-quality care and, in addition, have become fiscally solvent. No less is expected of the newly combined obstetrical unit.

Encouraged by what appears to have been a beneficial exchange, both hospitals have continued to evaluate services presently provided by each in an effort to determine which must be duplicated and which, if quality care is truly a consideration, must not. To this end, a joint profile committee comprising staff physicians, trustees, and administrators from both institutions has met at weekly intervals to discuss not only "How many?," but "Where?"

#### MEDICAL STAFF ACTIVITY

At about the same time, approximately four years ago, several members of the medical staffs of each hospital began independent, though simultaneous, inquiry into two major areas of medical staff activity in their respective hospitals—medical staff organization and continuing medical education. Their conclusions were inescapable; they had helped to create organizations that, albeit completely customary and even traditional, were totally incapable of meeting their stated objectives. These objectives, reiterated in medical staff bylaws across the country, were to provide an effective instrument for self-government and a means through which each patient might be assured high-quality medical care.

As these two medical staffs explored the methods by which they managed their affairs and then compared notes, they were surprised to find that they were often critical of themselves, for the two staffs comprised essentially the same physicians. They were still more appalled by the realization that, in spite of the hundreds of

physician hours devoted to medical staff activities, little actually was accomplished; it was almost impossible to demonstrate that quality of care was in any way influenced by their repetitive, reduplicative, and therefore unrewarding medical staff activities. The pill seemed twice as bitter as they realized that the same physicians were wasting their time in not one, but two, hospitals. Conditions could not have been more favorable for reform, for it would not be difficult for them to abandon "what they had."

What they had were two medical staffs, whose bylaws essentially were indistinguishable from each other. Each staff had a president who performed his assigned duties, which were limited to conducting medical staff meetings. Neither of these two top men—the selected staff leaders most directly accountable to the governing boards for the quality of care practiced by their medical staffs—had been delegated any authority, and neither could hope to influence quality except through exhortation and/or appeal to one or more committees.

#### COMMITTEES, COMMITTEES . . .

And both institutions certainly did have committees! Medical staffs traditionally have been able to spawn committees in numbers proportionate to needs, and, generally, a new committee is formed to grapple with a new need. Listed for both institutions were committees labeled executive, credentials, audit, records, tissue, blood, death, infection, drugs, utilization review, equipment, disaster, emergency department, intensive care, education, library, standardization, and abortion, among others.

Those were the standing committees. Add to them the ad hoc and the temporary committees, which like temporary buildings, seem to last forever, and between the two hospitals one surveyor was able to list 88 committees. Some were obviously more "active" than others, but each was responsible for making a certain number of inroads into staff physicians' available hours.

If it was almost impossible to justify the existence of so many committees, it was entirely impossible to justify the overlapping activities many of them performed. For example, given reasonable circumstances, such as an anemic postoperative Medicare patient with a decubitus ulcer, the same chart conceivably could be reviewed by members of the infections, trans-



fusion, utilization review, tissue, complications, medical audit, drug utilization, and, possibly, medical records committees!

Moreover, although they differed in their assignments, committees often were identical in composition. Operating under the precept that broad representation by specialty implied thorough deliberation and, hence, valid decisions, committees habitually included a surgeon, an internist, a family practitioner, a pediatrician, a psychiatrist, a pathologist, a radiologist, a urologist, an orthopedist, and a gynecologist. While perhaps theoretically sound, committees so composed became committees of one, rather than committees of many. In discussing tissue removal from the female reproductive system, for example, the group usually deferred to the judgment of the gynecologist. Surgical questions were handled by the surgeon, pediatric problems by the pediatrician.

What's more, these "one-man committees" did not necessarily avail themselves of the wisest and most seasoned persons on the staff, for often those physicians already had "served," had "fired and fallen back," and it was the most recent additions to the staff who were tapped for committee appointments. At best, it sometimes was difficult for these relative newcomers to render critical judgments against their well-entrenched confreres on the active staff.

#### 'GETTEM' VS. 'GOTTEM'

Among those committees concerned with quality control, an additional factor was noted—each appeared to operate under an assumed mandate to isolate, identify, and indict miscreant physicians. This policy, whimsically labelled the "gettem" policy, implied that these committees were created in order to smoke out those staff members who were practicing substandard medicine. Having done so, they presumably were supposed to "gettem."

"Tissue Committee! Identify the physicians removing normal tissues and gettem!" "Utilization Review Committee! Find the men who overutilize and gettem!" "Transfusion Committee! Pinpoint the single-unit users and gettem!"

It was difficult to determine how long this gavotte had been going on, but it was not difficult to see that it was falling short of its objectives of ensuring high-quality care—and for an unassailable reason: no committee ever "gottem." A remarkable ration of rhetoric was

recorded, and a commendable amount of correspondence was accumulated, but not once did anybody gettem.

The utilization review committee did come pretty close, however:

*"Dear Doctor: As a result of a routine survey of Medicare patients, the Utilization Review Committee wishes to inquire further into the recent hospitalization of your patient, Mary Smith. Your committee specifically wishes to inquire whether or not this patient's stay might possibly have been shortened had she been transferred to an Extended Care Facility. Kindly indicate your response below and return prior to our next meeting."*

And the response, predictably, was "Yes; possibly."

Equally as frustrating was conjecture over what might take place were a committee actually successful, if a committee actually *did* gettem. It was highly doubtful that there would be any change in behavior; it was more likely that the problem simply would be transferred from one hospital to another, or from one committee to another. If we really gottem, somebody else would gettem!

#### THE CRITICAL ISSUE

The critical issue now should be apparent; two neighboring hospitals had overlapping medical staffs, organized without clear lines of accountability, directed by leaders without authority, and operated by means of reduplicative committees dedicating countless hours to causes that resulted in no demonstrable changes in behavior. Combining the two medical staffs into a single unit obviously would diminish by half the number of physician hours spent in committee and departmental meetings, but, taken by itself, such a move would only reduce the price of failure.

The path to increased effectiveness had to lie not so much with fewer meetings, but with different types of meetings; suggestions were heard relative to abandonment of committee meetings in exchange for more stimulating department, service, or section meetings.

Relying entirely upon a hypothesis that peer groups are best qualified to evaluate their own performance, the combining of the two medical staffs, with sweeping reorganization, commenced. The *modus operandi* was seen as the substitution of exclusive clinical section meetings



for multispecialty committee meetings, an exchange conducive to educative rather than "getcha" techniques.

## TWO DISTINCT FUNCTIONS

All of the functions performed by a medical staff can be sorted into two groups, one labeled "housekeeping," or administrative, the other labeled quality control, or audit, or more inclusively, professional activities. A new executive committee, comprising the upper echelon of medical staff leadership—the chairmen of the several clinical departments—and chaired by the staff president, was assigned to carry out each of the staff's administrative duties, with the exception of credentials. The next echelon of medical staff leadership, the clinical service chiefs, was combined into a professional activities committee. This committee, directly accountable to the executive committee and chaired by the staff vice president, was instructed to ensure that all quality control activities were being carried out, not by homogenized committees, but by clinical services; in other words, surgeons would evaluate surgeons, pediatricians would evaluate pediatricians, psychiatrists would evaluate psychiatrists, and so on.

In order for a specialty group, or clinical service, to evaluate the activities within that service, two conditions had to be met: (1) all, or at least a majority, of said specialists must participate, and (2) those doing the evaluation must be able to obtain data without being obliged to research individual clinical charts. Put another way, all of the physicians had to be able to examine all of the data.

If this process were to take place at service meetings, service members had to be present, a concept that translates into "compulsory voluntarism." The staff members of each of these hospitals were willing to commit themselves to attendance at 9 out of each quarter's 13 weekly meetings.

The compulsory component applies to all members of the active staff—those staff members who are professionally "active." Physicians who prefer not to participate in a performance review and who prefer not to attend the weekly meetings may transfer to courtesy status, thereby also becoming less "active," because they are limited to not more than 20 "patient contacts" per year. Active members have maximum privi-

leges and maximum responsibilities, courtesy members have minimal responsibilities and corresponding privileges.

## USE OF PAS/MAP

A medical staff undertaking an evaluation of quality through an assay of what really goes on commits itself to an ongoing examination of medical data; after this decision is made, the data system (PAS/MAP) offered by the Commission on Professional and Hospital Activities comes into its own. Conversely, it might be noted that PAS/MAP falls into disfavor when there is no medical staff commitment to data evaluation. Nothing accumulates as rapidly as unused PAS/MAP reports, and nothing dismays administrators quite so much as unopened cartons.

Inasmuch as PAS data reflect medical records, a commitment to data equals a commitment to medical records, an implication that the records must not only be complete—they also must be timely. A staff studying its own performance should know what it is doing *now*, not what it was doing six months ago. A staff so motivated can define timeliness in its bylaws, and inducements to comply with the bylaws can easily be implemented.

The combined Porter Memorial/Swedish Medical Center staff decided that records could not be more than two weeks in arrears. Whenever this period is exceeded, the responsible physician has only to bring his records up-to-date in order to have his privileges restored. Much administrative effort goes into meticulous notification and renotification of impending deadlines, but results appear to justify the time expended. The turnaround time for PAS reports is from two to three weeks, and nearer to two than to three. High morale is contagious, and some physicians formerly included almost invariably on delinquent lists now are among the most vocal in announcing their punctuality.

The availability of reliable medical statistical data via PAS has enabled the clinical services to say, "This is the way it is," rather than, "This is the way we think it is." Having seen "the way it is," clinical services have reacted in a manner so consistent as to be considered predictable: when presented with the facts, physicians inevitably will elect to practice superior medicine in preference to inferior medicine.



## COMMITTEES REDUCED TO FOUR

The reorganized combined medical staff has been in operation for 13 months. Its committees have dwindled to four. The executive committee, professional activities committee, and credentials committee each have met 13 times; there have been 7 general staff meetings and 13 meetings of the subcommittee on utilization review. Admittedly, no savings in physician hours takes place when a committee is replaced by a subcommittee, but a savings does take place when the subcommittee is reduced from 13 to 3 physicians and when the bulk of the work generated by that statistical samba, called utilization review, is delegated to nonphysicians.

For instance, inasmuch as Medicare requires a review, "on a sample or other basis," in order to ascertain necessity of admission, who could be better qualified to perform that review than the medical records administrator, who already reviews the clinical chart of each and every patient? The review sample then becomes 100 per cent, and the opinions forwarded to the physician members of the subcommittee usually are quite astute. Also offering opinions to physicians on the utilization review subcommittee are the medical social workers at both hospitals; during the course of their daily routines within the hospital, these employees are in an excellent position to monitor the certification/recertification ceremony required by Medicare.

With those functions of quality evaluation other than the economics of care, or length of stay, delegated to clinical departments, services, and sections, there isn't much left for the utilization review subcommittee to do, particularly when current length-of-stay statistics remain stable at about 9.8 days per Medicare admission and at 5.9 days for all admissions. Both of the hospitals and their patients apparently are well served by the system, for, as of this date, there have been no retroactive denials of benefits for Medicare patients.

After the clinical departments, services, and sections assumed responsibility for the remaining functions of quality evaluation—the type, timing, and efficacy of medical care—there wasn't much left for the subcommittee on medical audit

either and, for that reason, this subcommittee, comprising a physician chairman and two assistants, meets only on call. Their job, according to the bylaws, is limited to providing assurance that the process of quality audit actually is taking place within the clinical divisions of the staff and that these activities are recorded properly.

## PROBLEMS, NOT MDs, SINGLED OUT

Since January 1972, 14 clinical departments, services, and sections have been meeting for not more than one hour each week. The meetings are organized and topics selected several months in advance. Visual aids, data, methods, moderation, and, occasionally, direction are provided by members of the Interhospital Education Association, an educational team whose budget is derived from both hospitals. This same team assists in subsequent reevaluations through which actual changes in performance may be measured. The output of these meetings is substituted for the efforts of traditional committees. No longer does a committee study appendixes; instead, the surgical service studies its own performance in the management of appendicitis, a safari that may lead through territory formerly occupied by committees called tissue, infections, complications, transfusion, audit, and utilization review. Because there no longer is any compulsion to single out physicians, attention now may be directed toward singling out problems.

It required several minutes for the most recent surveyor from the Joint Commission on Accreditation of Hospitals to catch his breath after learning that many beloved committees had passed away and that he would not have to go over identical bylaws and minutes at two different hospitals. His final recommendations, so far as the medical staff and its organization were concerned, were the briefest in the history of the two hospitals. He indicated that it might prove helpful if a nursing representative were to join the medical records administrators on the subcommittee on medical records. This was easily arranged; besides, that subcommittee doesn't meet very often anymore.



### Some Clinical Aspects of Blood Glucose Determinations

It is generally accepted today that the physiological defect in diabetes mellitus is a deficiency in insulin secretion. This failure is severe in the juvenile diabetic, but is generally less pronounced in the maturity-onset form of the disease, in which although the circulating insulin level may be "high," it is decreased relative to insulin requirements. Clinically, the classification of "overt" diabetes (classical symptoms with fasting hyperglycemia), "latent" diabetes (no symptoms but with impaired glucose tolerance), "subclinical" diabetes (impaired glucose tolerance only upon stress, pregnancy, etc.), and "prediabetes" have been established. In clinical practice, perhaps the greatest number of diabetic patients fall into the "latent" category, requiring laboratory investigation to establish the diagnosis.

The three most widely used screening values are the fasting morning, and the one and two-hour postprandial glucose levels. (In this discussion, all values will refer to serum or plasma levels, which are most widely used today and which are about 15% higher than whole blood levels.) Though probably still the most widely used, the fasting morning value is certainly the least reliable, as a large number of latent diabetics have fasting normoglycemia. Both the one or two-hour postprandial values are far preferable, the choice between the two depending largely on the ordering physician's own experience. In general, the higher the postprandial glucose level, the greater the chance of having or developing diabetes mellitus. An abnormal postprandial level must thus be followed by a glucose tolerance test (GTT). Because there is not an absolute correlation between the postprandial test and the GTT, possibly due to the insulin-stimulating effect of non-glucose foodstuffs, some authorities recommend a specific glucose load followed by a one-hour or two-hour subsequent glucose determination as a screening test.

For correct interpretation, proper patient

From the Department of Pathology, Methodist Hospital, Memphis, Tenn.

preparation for the GTT is necessary, including at least 150 gm. carbohydrate ingestion for three preceding days, normal physical activity, absence of illness, endocrinopathy, trauma, or pregnancy, and avoidance of drugs which either raise or lower blood sugar levels.

Because of the differences in the values obtained with different technical methods, and differences in serum and whole blood, each physician should be familiar with the procedure employed by the laboratory performing his tests. Various interpretative methods for the GTT have been proposed, and if determinations are made on the fasting, 1, 1½, 2, and 3 hour specimens, any of the schemes may be employed. The frankly abnormal GTT provides no difficulty in interpretation. However, the equivocal or "borderline" test may be a problem, and it should be remembered that variations in glucose tolerance may be encountered at different times in the same individual, necessitating more than one GTT before diagnosis may be assured. While in the majority of instances an equivocal GTT becomes upon repetition more obviously abnormal, a significant number may actually become nearer normal, and a few remain in the borderline category. This fluctuation is actually a laboratory manifestation of the variable course of diabetes itself, in which there has been shown to be a considerable degree of variability in glucose tolerance, particularly in the early stages, in both the juvenile and adult patient.

A high peak glucose value in a GTT not otherwise obviously abnormal is another problematical and not infrequent finding. Many such patients will ultimately develop diabetes, particularly those with a positive family history, again indicating the need for subsequent re-testing.

The age of the patient also should be considered. The standard "normal" GTT values were designed for the healthy patient under 50 years of age, and that glucose tolerance decreases with increasing age is well known. While the significance of this trend is still being debated, some authorities recommend adding 10 mg. per 100 ml. per decade over 50 years of age to the accepted normal GTT values to accommodate this decreased tolerance.

Finally, various other causes of impaired glucose tolerance must be kept in mind. These include various endocrinopathies, cardiovascular



disease, infection, hepatic, renal, and neurological disease, stress, physical inactivity, and so forth—all of which invalidate the diagnostic usefulness of the GTT. Even such simple measures

as avoidance of caffeine and nicotine prior to performance of the GTT are necessary to provide maximal reliability of this valuable test.

Dean G. Taylor, M.D.

\* \* \*

### **Clinical Center Study of Patients with Breast Cancer**

The cooperation of physicians is requested in the referral of patients with breast cancer for studies being conducted by the National Cancer Institute's Medical Breast Unit in cooperation with the Surgical Breast Program at the Clinical Center, National Institutes of Health, Bethesda, Maryland. Since we desire to study these patients from the time of strong suspicion and histologic proof to the termination of their breast cancer we wish to do so in close cooperation with the referring physicians. Accordingly, the referring physicians would be informed about each patient visit to the Clinical Center, and there would be no major therapeutic changes in any patient's management without the consultation and concurrence of both the referring physician and the patient.

We are interested in following patients with primary breast carcinoma, and outpatients referred for a suspicious breast lesion. These latter patients would be studied diagnostically to ascertain if our present techniques can be improved upon. Of especial interest are those patients who have positive axillary nodes found at surgery. This group of patients has an approximate 45 percent five year survival rate, and they may be eligible for adjuvant chemotherapy study programs. The drug regimens employed have been found to be well tolerated by our patient groups and are designed to test the concept of whether or not long term adjuvant chemotherapy in this disease will be as beneficial as it has been shown to be in other diseases. We feel that these are extraordinarily important programs and they are being done in cooperation with other centers in order to achieve significant patient numbers to answer the question in the shortest possible time.

We are also interested in the referral of patients with measurable disease at the time of their first recurrence. Such patients will be considered for studies utilizing standard hormonal manipulations with or without the addition of chemotherapy. Patients referred with metastatic disease subsequent to hormonal therapy will be considered for chemotherapy studies if they have measurable disease.

It is expected that patients not yet eligible for protocols, but who are being followed at the Cancer Institute, would not be placed on a protocol until after consultation with the referring physician. In those instances where the protocols call for surgical procedures the Cancer Institute would be willing to do the procedures; however, the referring physician would have the option of performing the operations himself.

At all times the patient would retain the prerogative to drop out of the program. Similarly, at all times the referring physicians would have the option of withdrawing their patients from the program.

Physicians interested in further details and in having their patients considered for admission may write or telephone:

Douglass C. Tormey, M.D., Ph.D.  
Head, Medical Breast Unit  
National Cancer Institute  
Building 10, Room 6B17  
Bethesda, Maryland 20014  
(301) 496-1547

or

Glenn Geelhoed, M.D.  
Administrative Head  
Surgical Breast Service  
National Cancer Institute  
Building 10, Room 10N119  
Bethesda, Maryland 20014  
(301) 496-2031



## HISTORY

A 66 year old railroad switchman entered the emergency room complaining of severe precordial pain. He stated that he had been hospitalized else-

where two years ago for a myocardial infarction. He had had occasional "tight" substernal chest discomfort with exertion over the preceding year and a half which was relieved by .4 mg of nitroglycerin sublingually. On the morning of admission he awakened at 4 o'clock with severe, "crushing" substernal pain that persisted in spite of nitroglycerin over the 1½ hours before arriving at the hospital emergency room. The following electrocardiogram was obtained. (Fig. 1)

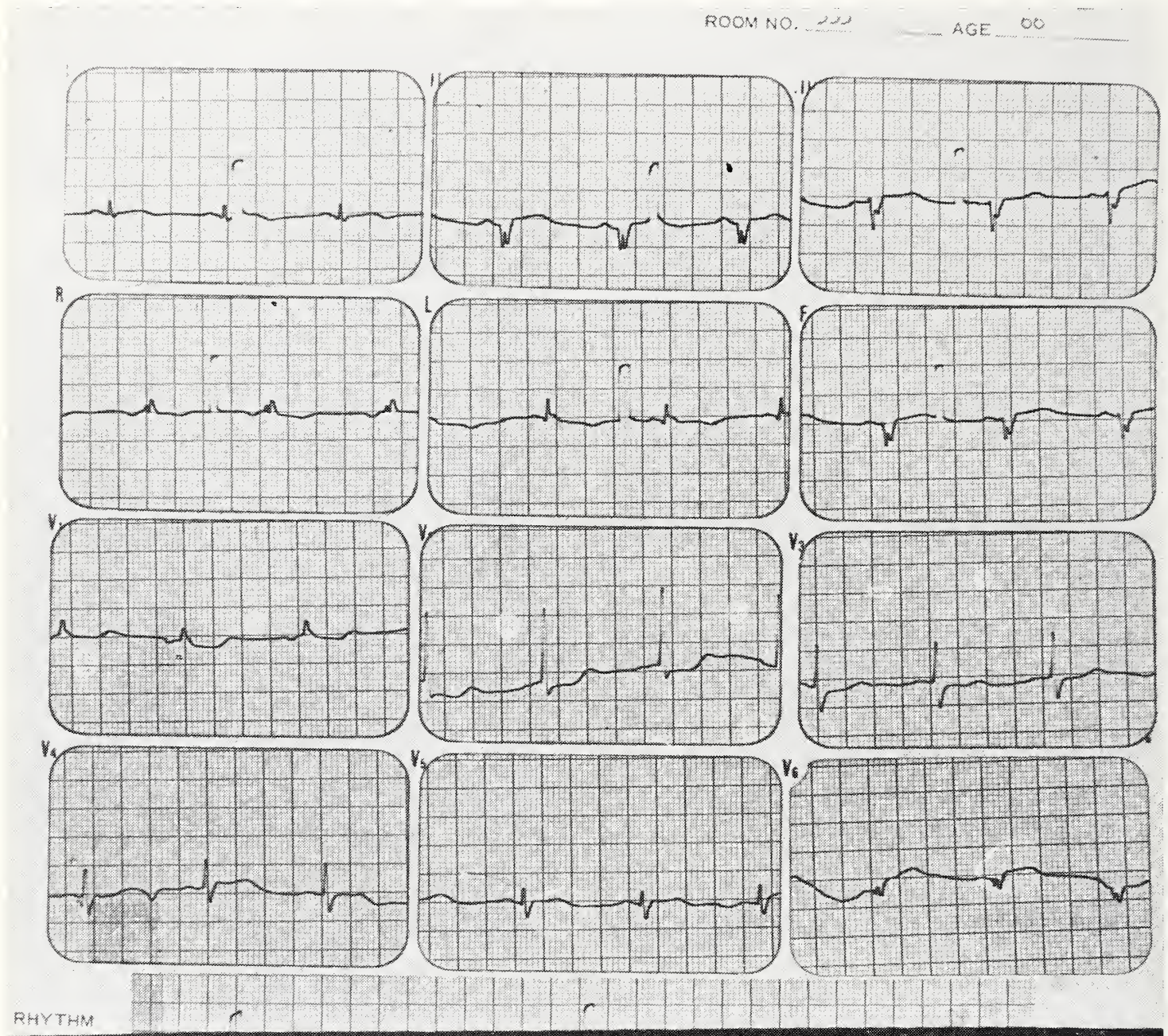


FIG. 1

## DISCUSSION

The rate is noted to be quite regular at 74/minute. The P-R interval is normal at 0.17 seconds. The P waves are somewhat broad and are slightly inverted in leads V<sub>1</sub> suggesting but not diagnostic of left atrial enlargement. The QRS forces in the frontal plane are observed to be abnormally superior causing the

appearance of Q waves in leads 2 and AVF with a predominant S wave following a very small upright deflection in lead 3. The ST segments in these leads are noted to be somewhat inferiorly oriented resulting in mild elevation in leads 2, 3 and AVF.

Scrutiny of the precordial leads reveals an unusually broad and prominent R wave in leads V<sub>1</sub> and V<sub>2</sub>. It is noted that the ST segments

(cont'd on p. 444)

From: St. Thomas Hospital, Department of Cardiology, Nashville, Tennessee, 37203.



A 17 year old white male athlete was admitted to the hospital because of gradual onset of swelling of the right arm and the right side of the face over a period of several weeks, and recent shortness of breath.

He gave no history of fever, chills, weight loss or pain and was in complete good health, until the present illness. Physical examination revealed a well nourished, well developed male in no acute distress. Dilated veins were noted on the right side of the trunk, neck and right arm. A few palpable small nodes in the right posterior angle of the neck. Other physical findings were normal.

Posterior and lateral radiographs of his chest made on admission are shown as Figure 1 and Figure 2.

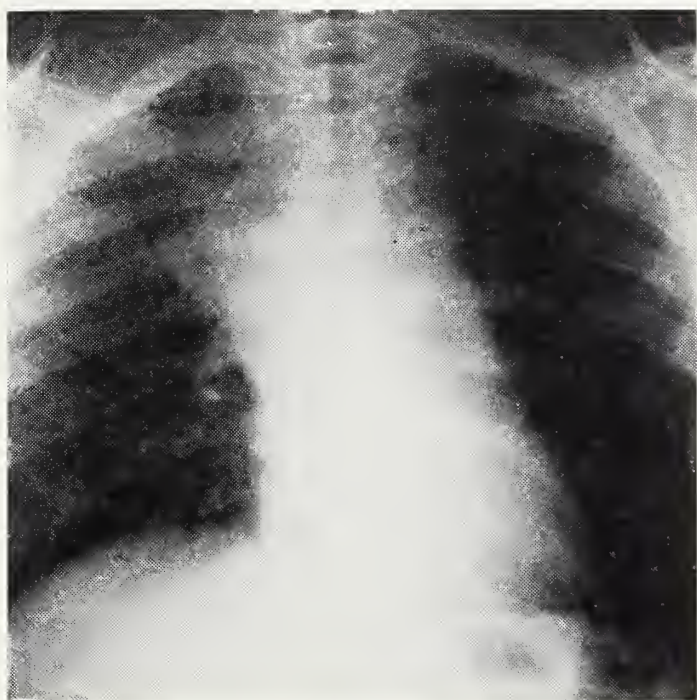


FIG. 1

The P.A. and Lateral radiographs on the chest show a large, lobulated soft tissue mass in the anterior mediastinum, extending bilaterally and more prominent on the right. The trachea is slightly shifted to the right and posteriorly. There is some elevation of the right hemidiaphragm. The mass shows no calcifications. No other parenchymal pulmonary disease is identified. The bony thorax and heart are normal.

The films of the abdomen were normal. No masses or organomegaly were appreciated. The excretory urograms and liver scan were also normal. Lymphangiograms revealed some inflammatory nodes in the inguinal areas. The pre-aortic and pelvic nodes were normal. Large abnormal nodes were found in the mediastinum and the right superclavicular areas.

Routine laboratory tests were normal. Bone marrow

From the Department of Radiology, Vanderbilt University Hospital, Nashville, Tenn. 37232.



FIG. 2

biopsies were normal. Repeated cervical and supra-clavicular lymph node biopsies were negative.

### DIFFERENTIAL DIAGNOSIS

Mediastinal mass with superior vena caval obstruction.

1. Mediastinitis.
  - a. Acute: mediastinal abscess.
  - b. Chronic:
    1. Granulomatous—histoplasmosis, and less commonly tuberculosis, sarcoidosis, and Norcardia.
    2. Idiopathic sclerosing mediastinitis—This may be associated with retroperitoneal fibrosis, pseudotumor of the orbit, Riedel's struma.
2. Mediastinal tumors.
  - a. Thymic lesions—thymoma, benign or malignant, thymic cyst, thymolipoma.
  - b. Germinal cell neoplasms—dermoid cyst, teratomas, benign or malignant, choriocarcinoma, seminoma
  - c. Intrathoracic thyroid.
  - d. Lymphomas—Hodgkin's disease, lymphosarcomas.
  - e. Parathyroid lesions.
  - f. Mesenchymal tumors—including



- hemangiomas, lymphangiomas and lipomatosis.
- g. Mediastinal bronchogenic carcinoma.
- h. Mediastinal metastases.

#### DIAGNOSIS

A biopsy through a right thoracotomy revealed a malignant tumor, most consistent with a seminoma. Other pathological considerations included reticulum cell sarcoma and malignant thymoma of a large cell type.

The patient was treated with 4,400 rads of radiation. The tumor responded dramatically to the radiation, and shrank markedly in size on subsequent chest radiographs. This type of response to radiation is typical of a seminoma.

**FINAL DIAGNOSIS:** Primary seminoma of the anterior mediastinum.

#### DISCUSSION

Approximately thirty cases of primary seminomas of the mediastinum have been reported in the literature. The tumors invariably are located in the anterior mediastinum in relation to the thymus. Pathologically, they have been called seminomatous thymoma, or seminoma-like tumor of the thymus. Males, especially in the second, third and fourth decades, are involved almost exclusively; only two females have been reported.

The tumor probably arises from the totipotent cells, or totipotent sex cells in the region of the thymus. Ewing considered the tumor as a unilateral development of a teratoma.

The most common presenting symptoms are retrosternal pain, dyspnea, dysphagia and superior vena caval syndrome as in our case. There is no association with myasthenia gravis

or known hormonal production.

The prognosis is related to tumor size and to the histology of the tumor. The tumor may be well encapsulated and complete surgical resection would result in a cure. However, it is quite common to find the tumor adherent to the large vessels, precluding complete resection. Fortunately, the tumor is highly radiosensitive and radiation therapy may produce remission or even a cure. The general prognosis of mediastinal seminomas is much better than other mediastinal embryonal cell carcinomas, which usually lead to death of the patient within five months. Metastases from primary seminoma of the mediastinum can occur to the mediastinal lymph nodes, lungs, spleen, adrenals, neck, mouth, and other unusual sites. Recently, we learned that the patient developed some right axillary nodes.

YING T. LEE, M.D.

JANET HUTCHESON, M.D.

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\* \* \*

#### EKG of the Month

(cont'd from p. 442)

in these leads are posteriorly oriented thus causing the depression of the ST segment in leads V<sub>1</sub> and V<sub>2</sub>. The T waves are anteriorly oriented (in the same direction as the QRS complexes) and are thus upright in leads V<sub>1</sub> and V<sub>2</sub>. A strictly posterior infarction (the reciprocal of an anterior infarction) is very commonly seen in the presence of an inferior infarction and is recognized by the prominence

of the anterior forces in association with posterior orientation of the ST forces. Note that the R Wave becomes progressively smaller in V<sub>5</sub> and V<sub>6</sub>. This would imply that there may be a lateral component with the inferior infarction.

Final diagnosis: Inferior lateral myocardial infarction of undeterminate age in association with a strictly posterior component.

W. Barton Campbell, M.D.

Harry L. Page, Jr., M.D.

Co-Directors



## The Treatment of Hyperthyroidism With Radioactive Iodine\*

The bewildering proliferation of knowledge about thyroid disease that bombards us almost daily sheds light in corners we never knew existed. In fact, it makes our understanding and handling of thyroid problems so much more complex that one almost wonders whether it is not more of an anathema than a blessing.

Hyperthyroidism is no longer defined purely by the classical descriptive relationships that we recognize as Graves' disease or as Plummer's disease. Now, a listing of etiologies of hyperthyroidism would include Graves' disease, toxic multinodular goiter, toxic uninodular goiter, T3 toxicosis,<sup>1</sup> subacute thyroiditis,<sup>2</sup> Jodbasedow's disease,<sup>3</sup> factitia,<sup>4</sup> choriocarcinoma,<sup>5</sup> hydatidiform mole,<sup>6</sup> struma ovarii, TSH producing pituitary tumor,<sup>7</sup> chronically increased TRH secretion by the hypothalamus,<sup>8</sup> and thyroid cancer with functioning metastases. While the lion's share of newly diagnosed cases of hyperthyroidism present as classical Graves' disease, these other etiologies must be kept in mind.

Although the four major symptoms of Graves' disease (goiter, exophthalmus, tremor and rapid pulse) plus the minor symptoms easily characterize the hyperthyroid state, many of these symptoms can be seen with malignancies, diarrhea, anxiety neurosis, fever, heart trouble, and muscular disease. To further compound the difficulty of diagnosing hyperthyroidism from clinical symptoms alone, many patients with apathetic hyperthyroidism as well as patients with multinodular goiter with hyperfunctioning autonomous tissue, may have almost none of the classical symptoms referable to thyroid disease.

Laboratory data alone may also be misleading. Hyperthyroidism may be incorrectly suggested by the elevated uptakes that are commonly seen in congenital goiter, iodine deficiency, or subacute thyroiditis. It may also be incorrectly suggested by the elevated blood hormone levels that are seen in some cases of thyroiditis or following the administration of

estrogens. Conversely, a clinically hyperthyroid patient may have normal PBI and T4 blood levels in T3 toxicosis or in toxic nodular goiter. Following therapy for hyperthyroidism, laboratory tests may be still more confusing. While classical Graves' disease is usually easy to appreciate on clinical grounds alone, most patients with suspected hyperthyroidism need a battery of thyroid tests (uptakes, scans and several blood tests) plus a good clinical evaluation.

The best treatment of Graves' disease is that which offers relief in a reasonable length of time with a high remission rate and low exacerbation rate, offers the least economic loss to the patient or third party, and carries the least hazard of any therapeutic modality. Radioactive iodine appears to be that treatment.<sup>9,10</sup>

Prior to 1964, Graves' disease was commonly treated with 7-12 millicuries of I-131. The remission rate approached 95%, but the complication of long term hypothyroidism was realized with almost 40% of the patients becoming hypothyroid in the first year, and subsequent hypothyroidism accumulating at a rate of approximately 3% per year with no leveling off.<sup>11</sup> Subsequently, several groups used 2-4 millicuries of I-131 for a therapeutic dose.<sup>9,12</sup> This resulted in only 7% of the patients becoming hypothyroid in the first year, and a subsequent cumulative rate of hypothyroidism of between 2 and 3% per year. This would lead to 49% of the patients becoming hypothyroid by the time 17 years had elapsed. This is essentially identical to the rate noted after surgery for hyperthyroidism. Unfortunately, the remission rate also dropped so that it took longer to achieve a euthyroid state. At one extreme some workers treat with 2-3 millicuries of I-131 plus stable iodine, while at the other extreme several workers treat with 9 millicuries of I-131, making almost all the patients hypothyroid and immediately starting thyroid replacement therapy.<sup>10</sup>

Most physicians in nuclear medicine treat with a dose of between 3 and 9 millicuries of I-131 (usually 5-6 millicuries), accepting this as the best compromise between these two therapeutic approaches. Generally, no attempt

\*From the Department of Nuclear Medicine, Parkview Hospital, Nashville, Tenn. 37203.



is made to titrate dose against estimated gland size and activity because of the inherent vagaries of such estimates. A response pattern to this therapy demonstrates that most patients are controlled within two months and if re-treatment is necessary, it usually is done at 2-3 months after the time of initial therapy. Although this mode of therapy with this response pattern approaches a 98% remission rate and less than a 2% exacerbation rate, the residual problems which are disease related, such as orbital changes, the integumentary changes and the skeletal changes usually respond in a pattern that is almost independent of the remission of the hypermetabolic state.<sup>10</sup>

The acute complications of I-131 treatment of Graves' disease are quite rare. Thyroiditis occasionally develops within the first 2-5 days and is transient and minimal. In Graves' disease a transient release of stored hormones which could induce exacerbation of congestive heart failure or arrhythmia is almost never seen.<sup>13</sup> This complication arises principally in the treatment of toxic multinodular goiter.<sup>14</sup> Delayed complications include hypothyroidism, hypoparathyroidism, and development of nodules. At the present time three cases of hypoparathyroidism developing after I-131 therapy for hyperthyroidism have been reported in the literature.<sup>10</sup> Since over 50,000 cases have been treated, this complication of hypoparathyroidism is so infrequent as to be considered probably an independently occurring disease entity rather than a disease secondary to the therapy.

Although the first reports of the use of radioactive iodine for treatment of hyperthyroidism were published in 1946, its use was limited principally to the older person because of fears of carcinogenesis and leukemia being induced by the radioactive iodine.<sup>15</sup> These fears have proved to be illusory. A large survey in 1967,<sup>16</sup> showed that in 22,000 patients treated with I-131 and 14,000 patients treated with drugs or surgery, the incidence of leukemia did not differ in the two groups. A second report delivered at the American Medical Association Meeting in 1969<sup>17</sup> stated that preliminary analyses of almost 50,000 cases indicates that the incidence of thyroid cancer is not different in those treated by thyroidectomy and those treated with radioactive iodine.

In part because these reports allayed the fears of carcinogenesis and leukemia and in part be-

cause of some failures with both surgery and antithyroid drugs for the treatment of hyperthyroidism, there has been a general lowering of the age requirements for the treatment of hyperthyroidism with radioactive iodine. There are now many large centers in the United States where children with hyperthyroidism are preferentially treated with radioactive iodine.<sup>18</sup> The possible genetic damage that could theoretically accrue as a result of radioactive therapy has been calculated to be miniscule.<sup>19,20</sup> The conclusions of the atomic bomb casualty commission<sup>21</sup> that no demonstrable increases in congenital anomalies, stillbirths or infant mortality in persons born of parents exposed to very great radiation dosage (much greater than that present from doses of I-131 given in the treatment of hyperthyroidism) also suggest that the genetic problem may be miniscule. Since children were generally not treated with I-131 for hyperthyroidism prior to the last ten years, another 20 years may elapse before this question can be answered on the basis of experience rather than on the basis of unconfirmed predictions.

While radioactive iodine is clearly the therapy of choice for Graves' disease (even in younger patients) the use of radioactive iodine for therapy of the toxic multinodular or uninodular goiter presents an entirely different problem.<sup>22</sup> While these two entities can be treated with radioactive iodine provided there is some suppression of the tissue that is not autonomous,<sup>23,24</sup> transient release of thyroid hormone may induce symptoms of thyroid storm in the very large multinodular toxic goiter treated with radioiodine therapy.<sup>14</sup> These toxic nodular conditions generally require much larger doses of radioiodine than is commonly used for classical Graves' disease and may either require fractional administration of radioisotopes or concomitant use of antithyroid drugs and iodides.<sup>24,13</sup> In general, surgery remains the choice of therapy for large toxic multinodular goiters after proper preparation by medical means including radioactive iodine. Radioactive iodine therapy for hyperthyroidism is contraindicated in pregnancy and generally is not used in children below five years of age.

Finally, a word should be said about the comparative costs of therapy of hyperthyroidism. A recent estimate published in the Mayo Clinic  
(*con't on p. 454*)





## from the tennessee department of public health

### Solid Waste Management In Tennessee

Common items such as garbage, trash, rubbish and other discarded materials have been recently termed "solid waste" both collectively and individually. Solid waste is generated by households, by industrial, commercial and agricultural operations and by general community activities. It does not include solids and dissolved materials in domestic sewage or dissolved and suspended solids in industrial wastewater discharges. When removed from wastewater streams, and dewatered, these materials become solid wastes.

"Solid Waste Management" is the storage, collection, transportation, processing and disposal of solid wastes within a common geographical area. These operations or services, excluding storage, are primarily provided by municipal and county governments and by private industry.

In the 1960's general concern about the quality of our environment focused attention on solid waste—The Third Pollution. National concern was initially expressed in the passage of the Solid Waste Disposal Act by Congress which was signed into law by the President on October 20, 1965. The stated purposes of this Act were: "(1) To initiate and accelerate a national research and development program for new and improved methods of proper and economic solid waste disposal, including studies directed toward the conservation of natural resources by reducing the amount of waste and unsalvageable materials and by recovery and utilization of potential resources in solid wastes; and (2) provide technical and financial assistance to state and local governments and interstate agencies in the planning, development and conduct of solid waste disposal programs." Funds appropriated under the provisions of this Act assisted the Tennessee Department of Public Health in beginning its solid waste management program in January, 1967, when the Solid Waste Management Section was established in the Division of Environmental Sanitation.

### THE PROBLEM

A survey of 382 Tennessee communities revealed that they generated 3.6 million tons per year of solid waste. Thirty percent of the population of the state was receiving collection service at the time of the survey, but only three of the 270 disposal sites could be approved. Tennessee was faced therefore with the challenge of changing solid waste *mismanagement* to solid waste management. The uncollected refuse has resulted in roadside littering and the large accumulations of refuse on public and private property commonly called roadside dumps.

The passage of surface and ground water through the roadside dumps and refuse disposal sites creates potentially hazardous water pollution problems. Not only is water contaminated at dumps but open burning results in large quantities of smoke which is detrimental to the surrounding environment.

### SOLID WASTE LEGISLATION

The Tennessee Solid Waste Disposal Act enacted in 1969 authorizes the Tennessee Department of Public Health to exercise general supervision over the construction, operation and maintenance of solid waste processing facilities and disposal facilities or sites.

This Act makes it unlawful to:

1. Place or deposit any solid waste in waters of the state except in the manner approved by the Department and the Tennessee Water Quality Control Board.
2. Burn solid waste except in the manner and under conditions prescribed by the Department and the Tennessee Air Pollution Control Board.
3. Construct, alter or operate a solid waste processing or disposal facility or site in violation of the rules and regulations, by orders of the Commissioner, or in such a manner as to create a public nuisance.

Also in 1969, an Act was passed which authorizes the various counties in the state to provide refuse collection and disposal services, and provides the administrative mechanism by



which the counties can provide these services.

In 1971 the "State Grants for Local Solid Waste Disposal" Act was passed to provide grants of state funds to cities, towns and counties for operating approved solid waste processing or disposal facilities as determined by the Tennessee Department of Public Health. The General Assembly appropriated \$1,000,000 for the fiscal year 1972-73 for grants to local governments.

In 1971 a new Litter Law was enacted which stipulates that an object of litter bearing a person's name shall be prima facie evidence that the person whose name appears on these objects either deposited the object or caused it to be deposited. The maximum fine for littering was increased from \$25 to \$50. The judge may allow an individual convicted of littering to remove litter from the section of the highway in lieu of paying a fine and/or imprisonment.

#### RECENT PROGRESS, 1968-1972

Refuse collection service to nine counties in the state has been established, and three counties are in the final stages of establishing service to residents outside of the incorporated areas. This will provide collection service to an additional 20% of the 1.2 million persons in the state who did not have access to it in 1968. Collection systems consist of strategically located bulk refuse containers to which individuals or businesses carry their refuse. It is also collected periodically by packer trucks and hauled to a sanitary landfill. These systems have either drastically reduced or eliminated the massive roadside dumping in these counties.

In the latter part of 1972 there were 72 approved sanitary landfills in the state serving a population of 2,183,888 in 170 cities and counties. Most began operation after January, 1972. The availability of state funds for approved solid waste disposal systems is considered to be the prime motivation behind local governmental entities providing approved facilities.

#### PUBLIC HEALTH'S INVOLVEMENT

The Division of Sanitation and Solid Waste Management, Tennessee Department of Public Health, works closely with city and county officials to carry out their responsibilities in administering the Tennessee Solid Waste Disposal Act. The staff works with city and county officials in the selection of disposal sites, taking

into consideration topographical, hydrological, geological and location factors. Multi-jurisdictional systems are sometimes recommended for economy. The staff reviews plans for proposed sites and makes routine inspections of the operations.

At the request of the General Assembly the staff made a study of the junk car problem in the state with recommendations for resolution of the defined problems. A survey of industrial solid waste disposal is now underway to define the problems related to it.

Environmentalists in local health departments have had considerable in-put in the solid waste management programs of Tennessee. They have promoted acceptable practices and have worked closely with local units of government in establishing collection systems and disposal operations, and are also making frequent inspections of the solid waste disposal operations.

#### OUTLOOK FOR THE FUTURE

The citizens of Tennessee have reason to be proud of local government officials and legislators for providing means for proper solid waste collection and disposal to a large portion of the state's population. It is anticipated that during the 1973 calendar year, there will be 106 approved sanitary landfills serving a population of 3,478,000. Similar progress is anticipated in providing refuse collection service to those citizens of the state who presently do not have access to such service. Through the help of the Division of Sanitation and Solid Waste Management many cities are taking a hard look at their collection operations with the objective of improving service and reducing cost by more efficient operations.

Efforts are being made in many directions to reduce the volume of solid waste produced in order to reduce the drain on our natural resources and the cost of solid waste management operations. Similar efforts are being made toward recycling and reusing some of our throw-away materials. A fairly good market exists at the present time for metal, paper, and glass.

Considerable progress has been made toward solving Tennessee's problem of solid wastes, and solutions to a number of them can be anticipated within a relatively short period of time.

JAMES C. AULT, *Director*

Division of Sanitation and Solid Waste  
Management

Tennessee Department of Public Health



**Medical and Surgical Problems  
In Psychiatric Hospitals**

A state psychiatric hospital is *not* a hospital by the definition of “an institution where the sick or injured are given medical or surgical care.” Rather it is an institution for the diagnosis and management of mental disease or behavioral abnormalities. Thus, at Central State Psychiatric Hospital (CSPH) many of the 1500 or more persons have the freedom of a large campus, living an active life, being observed for behavioral symptoms, and possibly being given drugs to alter or modify their abnormality. The philosophy of the open psychiatric hospital includes avoidance of much that smacks of a hospital atmosphere. White coats are shunned by the staff. Recording of vital signs, and checking on bowel movements and eating habits would defeat a desired environment of freedom in a more or less normal community life.

Physical illness then is of secondary or incidental significance, only to become recognized as in any community, either by the patient’s complaints or the recognition of disease by a watchful staff person who may decide to make observations upon vital signs. Upon evidence of physical disease, the staff physician may decide to diagnose and treat the disease, may seek consultation, or may admit the patient to the Medical Service, a “hospital” by the usual definition.

As a weekly consultant for some 33 years and as a daily *attending* to an infirmary of 18 “acute” beds and 46 beds for extended or nursing care at CSPH, I will make some observations upon the problems in management of physical disease among the mentally ill. (The experiences at CSPH can be duplicated in the other state hospitals.) (Fig. 1)

Obviously the body and tissues of one mentally ill are subject to the same causes of illness, whether extrinsic or degenerative, as those of the mentally well. The major differences between these two categories of patients are: (1) Probable untrustworthiness of subjective complaints or descriptions of symptoms by the patient; (2) Limits to physical or technical examinations; and (3) The impossibility of carrying out ideal

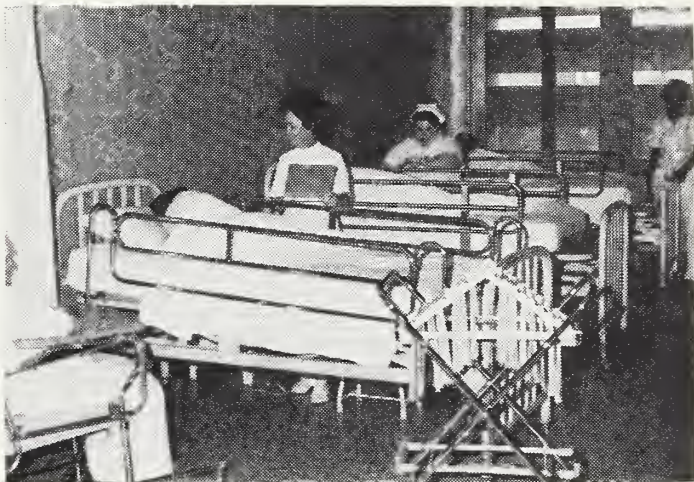


FIG. 1: Several of the 18 “acute” beds

or acceptable treatment. Since many aspects of physical examination require cooperation, examination of the chest is commonly quite impracticable, and an attempt at pelvic examination may end in failure.

To avoid a lengthy dissertation, it seems more practical to describe circumstances surrounding common diseases or clinical syndromes, in their diagnosis and management. (Table I)

A frequent disease to appear on the Medical

TABLE I  
A TWELVE MONTH EXPERIENCE  
MEDICAL SERVICE—CSPH  
(253 Admissions)

Age (years)	Discharges*		Deaths**	
	Male	Female	Male	Female
Under 20	2	6	—	—
20-29	5	3	—	—
30-39	3	6	1	1
40-49	12	14	—	1
50-59	17	19	1	4
60-69	19	24	9	6
70-79	14	19	13	12
80-89	4	15	6	13
90+	1	1	1	1
Total	77	107	31	38

\* Fracture of hip, 21; of long bones, 13; pneumonia, 19; cardiovascular, 12; malignancy, 10; diabetes mellitus, 8; cerebrovascular, 6 (48% of admissions).  
\*\* Pneumonia, 22; cardiovascular, 13; cerebrovascular, 12 (68%).



Service is *pneumonia*, often responding to treatment, yet associated with a high mortality rate especially in the 8th to 10th decades. In the majority, the usual complaints of acute respiratory disease are lacking. The story is that one of the nursing personnel suspected the patient of being "feverish," an elevated temperature was found, and physical and/or X-ray examination confirmed the diagnosis. Leukocytosis and a satisfactory response to antibiotics, if the patient survives, confirms the pneumonitis to have been bacterial rather than viral.

The patient who has had a *cerebrovascular accident* rarely offers complaints of prodromes, and is observed by someone to be somnolent, to have difficulty in swallowing and breathing, and mild fever, or, if the motor cortex is involved, paresis or paralysis of one or more extremities and inability to masticate food. These observations usually lead to a fairly rapid diagnosis and admission to the infirmary for supportive treatment.

Likewise, the patient who develops *congestive heart failure*, most commonly arteriosclerotic, less often hypertensive, rarely complains of symptoms. Attendants may observe breathlessness, orthopnea, tachycardia and edema, occasionally proxysmal nocturnal dyspnea, thereby leading to admission to the Medical Service. Upon occasion among the senile group one observes death quite obviously from myocardial ischemia, but usually with no inkling that the threshold to pain has been reached. Only rarely may one notice the movement of a hand to the precordium or a grimace, possibly to indicate pain.

*Fractures* of the femoral neck are anticipated among the aged in a state hospital. A fall resulting from transient hemiparesis is clearcut at times. More certain is the factor of normal postural hypotension upon standing, aggravated by medication with a psychotropic drug affecting the parasympathetic nervous system.

The dozen or so of *carcinomas* of the breast encountered each year are found most often by attendants assisting patients in bathing. In some, metastatic disease is already manifest when diagnosis first becomes feasible.

Events which usher in the not infrequent instances of *intestinal obstruction* or impaired intestinal motility are sufficiently dramatic to attract attention—vomiting, constipation and abdominal distension. The differential diagnosis

includes malignancy, infarction or volvulus, with or without the factors of fecal impaction, especially in the obtunded schizophrenic or depressed patient, or of adynamic ileus in the aged or in one on psychotropic drugs which impair smooth muscle function. These patients reach the infirmary quite promptly for observation, diagnosis, or transfer to a surgical service.

*Urinary retention*, either from no urge to void as in the catatonic schizophrenic, or in the elderly man with benign hypertrophy or carcinoma of the prostate, is quite promptly recognized by attendants, even though the patient is too obtunded, or has cortical atrophy too advanced to complain.

Acute bouts of *gallbladder disease*, *perforated peptic ulcer*, *appendiceal abscess* again may be accompanied by discomfort expressed as restlessness though a chief complaint usually is not forthcoming. One can only marvel at the depth of withdrawal in some schizophrenic patients to be oblivious to apparently well established peritonitis.

Commonly the schizophrenic or depressed patient is so unresponsive to thirst that dehydration is an ever recurring clinical problem, often reflected as moderate fever, prerenal azotemia, or as enhancement of fever in a febrile disease. Such a patient, insistent upon unseasonably heavy clothing, living in the summertime heat of the ward environment, is a candidate for heat collapse or the fearsome heat hyperpyrexia ("heat stroke").

*Status epilepticus* in a seizure patient, or the *withdrawal delirium* of a patient recently admitted and unknown to have been a constant user of alcohol, barbiturates or other drugs offer a medical emergency. Contrariwise, at times *drug intoxication* whether therapeutic, or from hoarding medication for an attempt at suicide bring patients to the Medical Service.

*Pulmonary tuberculosis* or *cancer of the lung* usually are identified upon the admission or the annual check-up chest film. Likewise the admission or annual hemogram may reveal blood loss *anemia*, macrocytic anemia of folate deficiency resulting from Dilantin therapy, or an occasional instance of chronic leukemia. *Diabetes mellitus* in the patient recently admitted to the hospital commonly is documented by the patient or his family. For the inmate of years, its development may be revealed by the annual laboratory studies, or may be suspected and



searched for because of weight loss.

Some 250 consultations on the "home wards" on the campus, exclusive of the infirmary, cover a wide spectrum of disease. Many patients to be treated *surgically* are identified thereby. Carcinomas of the breast, prostatic disease, bleeding hiatal hernias, hernias, hemorrhoids, rectal prolapse (common to schizophrenics), metorrhagia and menorrhagia from fibromyoma or ovarian failure, epitheliomas of the skin, cancers of the lip or tongue, cataracts, and other surgical odds and ends are recognized and recommended for surgical consultation, and/or operation, to be returned postoperatively to the Extended Care Facility of the Medical Service.

Most of the consultations for medical conditions result in suggestions for ambulatory management on the "home ward": arteriosclerotic heart disease with atrial fibrillation with or without mild failure, idiopathic hypertension, instances of Stokes-Adams attacks from complete heart block, nutritional deficiencies, obesity, iron deficiency anemia, diabetes mellitus in the elderly, phlebothrombosis, asthma, hay fever, untoward reactions to drugs, and the daily run of conditions encountered in general practice.

The several examples encountered each year of *hypothyroidism* or frank myxedema are lucky "finds." These patients usually have been entered to the psychiatric hospital by the family physician because of "depression" and the family greets the improvement and discharge of the patient following treatment as miraculous. Less often the curable "depression" of *vitamin B<sub>12</sub> deficiency* offers a like therapeutic triumph. Constant awareness of *metabolic disorders* such as porphyria is rewarded upon occasion. Though remaining alert to the more rare endocrinopathies, one more often needs to prove that the water-drinking schizophrenic patient does not have diabetes insipidus.

Instances of the common *dermatoses* are frequent. Stasic edema is common and troublesome in a largely sedentary population. Hypostatic dermatitis and lichen simplex chronicus are common, difficult to manage, often with eventual ulceration; fullblown erysipelas is not uncommon in such legs. Examples of erysipelas on other portions of the body occur quite frequently.

I have described some of the difficulties in diagnosis of disease in the population of a state psychiatric hospital, and have catalogued examples of the diseases encountered. Some

comment is needed upon the management of diseases as catalogued above. Medical therapy whether oral or parenteral offers few problems. The comatose patient who may live for months after a cerebrovascular accident must of course depend upon a nasogastric tube for medicaments and nutrients, with nursing care directed to the prevention of decubitus ulcers. Diabetic patients requiring insulin offer peculiar problems of maintaining a balance between hyperglycemia and hypoglycemia, related to the state of their psychosis—whether to eat or forego food, over and above the usual need for feeding the patient locked in a chair to thwart theft of food from others' trays.

The ideal care of surgical patients offers greater problems than the medical. Staged operations, as for maxillofacial surgery, are out of the question. Bringing a patient through one surgical procedure may be taxing; multiple operations are worse, even if the patient has not changed his mind after the first. The hazard of self trauma and opening a surgical wound by clawing is always present, and therefore the maintenance of psychopharmacologic control postoperatively is imperative. Even in non-psychotic persons but with sociopathic behavior, the urge for self-mutilation may be uncontrollable. Only rarely has cardiac surgery been considered, and only in a young person with episodic psychosis. Cardiac surgery, cardioversion or a pacemaker would be difficult to justify in one with senile dementia. Postoperative irradiation, if desirable, may be impossible, since some patients cannot be expected to maintain positions for given portals.

The basic policies for care of fractures of the femoral neck were set up by the late Dr. William Hillman. Surgical treatment should be reserved for patients who have been ambulant and caring for their physical needs before the fracture. (Fig. 2) He believed that wheel chair or bedridden patients were unacceptable for treatment, as were patients incontinent of urine and/or feces, because of the hazard of wound infections and even osteomyelitis requiring removal of the foreign body. Under the best of circumstances a percentage of patients will never walk again, even though they were ambulant previously. As in many old patients who have gone through a period of physical stress, their former state of physical well being is never regained.





FIG. 2: Physical therapy following surgical repair, fracture of hip

In meeting the request to prepare this review of medical and surgical problems in a state psychiatric hospital, I cannot end without acknowledging the contributions of a most competent nursing staff, of the skilled assistance of the clinical laboratory personnel, (Fig. 3) of



FIG. 3: Clinical Laboratory, Central State Psychiatric Hospital

my colleagues as consultants,\* and the resident staff of the Metropolitan General Hospital.

R. H. KAMPMEIER, M.D.

Medical Director

Central State Psychiatric Hospital  
Nashville, Tenn.

\* Dr. John Sawyers, Chief of Surgery, Metropolitan General Hospital, personally and with staff service provides a high degree of security in surgical problems. The orthopedic residents of that hospital provide competent care in the many problems presented to them with follow-up visits weekly at the CSPH. Dr. Stephen Schillig of the Medical Service of the Metropolitan General Hospital has graciously accepted the medical problems which we were not equipped to manage on our Medical Service. Drs. Ben Mayes and John Olson provide a firm diagnostic base in their radiologic interpretation. Dr. James Ward, electroencephalographer, and Dr. John Warner contribute their skills in neurologic disease. And lastly, I must acknowledge the help of colleagues at Vanderbilt University School of Medicine whom I may pester with an occasional request for some esoteric or research biochemical determinations or to answer a question which lies outside my comprehension.

\* \* \*

**FAMILY PHYSICIANS, INTERNISTS, GENERAL PRACTITIONERS, ORTHOPEDIC SURGEONS, and OB-GYN** needed for various communities throughout Tennessee. All opportunities are located in towns with a modern, fully-equipped, JCAH approved hospital. **Contact: E. J. Ryan, Jr.,** Director-Medical Relations, Hospital Corporation of America, P.O. Box 550, Nashville, Tennessee 37203.

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## from the regional medical programs

### Current Status of TMS/RMP

The Tennessee Mid-South Regional Medical Program last year conducted 83 projects at a cost of \$2,888,000 to improve the health care of the citizens of the area, according to Dr. Paul E. Teschan of Nashville, RMP director.

"Projects totaling \$2,166,000 were planned for 1973-74 before the Nixon administration announced that the 56 Regional Medical Programs in the nation would be terminated for fiscal 1974 because, according to the budget document 'there is little evidence on a nationwide basis that Regional Medical Programs have materially affected the health care delivery system.'"

"However, we believe we have a solid record of accomplishment in putting into effect innovative programs which brought improved health care to the people," the director said.

These included regional kidney, hypertension, and cancer and diabetes education programs, a teleconference network which brought continuing education to various health personnel via a multi-conference telephone system, and a network of coronary care holding units.

Planned for the coming year were educational programs dealing with physician-identified areas of need; educational activities for physicians, nurses, allied health professionals and patients as well as public education of health care delivery systems; expansion of the communications system developed with RMP assistance in 1972; and a regionalized high risk newborn care program for middle Tennessee.

"But these planned projects and services are in jeopardy because of the administration's proposed budget which would eliminate the RMP as of June 30, 1973," Dr. Teschan said.

"Our Program has made health care more available and more accessible so that the people throughout the area can have health care at a reasonable cost," the director said.

Dr. Teschan pointed out that the RMP, directed by representatives of various health care professions, is a group which coordinates private health services and offers organized solutions to local and area needs.

The Regional Advisory Group, composed of physicians, administrators, paramedical personnel and consumers, makes the decisions on how and where RMP funds are spent within the region.

"This assures that programs based on local needs as determined by local people are the ones funded by RMP," the director said. "The people of Tennessee, southern Kentucky and northern Georgia—the area encompassed in the Tennessee Mid-South RMP—will be the losers if the RMP is not continued."

Testifying recently before the House Subcommittee on Public Health and Welfare in this position of chairman of the National Coordinators Steering Committee, Dr. Teschan asked Congress to save the 56 RMPs from the federal budget bureau's ax.

The U.S. Senate has already passed a bill which would extend the expiring authorities of the Regional Medical Programs and other Public Health Services and Community Mental Health Centers until June 30, 1974.

A similar bill has been introduced in the House.

"The national administration has recommended no alternative to the RMP for bringing improved health services to the region," Dr. Teschan said.

He listed the following projects as among those funded last year:

- Hypertension project at Alton Park in Chattanooga
- Cardiac screening of school children in Southeast Tennessee
- Liaison nurse project in Oak Ridge coordinating extended care resources to shorten hospitalization.
- Providing portable isolettes for transporting distressed infants to the Intensive Care Nursery at the University of Tennessee Memorial Hospital in Knoxville.
- Nurse practitioner project which provides primary health care to the rural isolated areas of Claiborne and Campbell counties in Tennessee and Bell County in Kentucky.
- A communications system linking hospitals



in Caldwell, Calloway, Christian, Logan and Trigg counties, Kentucky

- Home Health agency in Bowling Green
- Planning for Pennyryle emergency medical services
- Multiphasic health screening laboratory at Meharry Medical College in Nashville

Planned projects for 1973-74 include:

- Emergency medical services providing hospital to hospital and ambulance to hospital communications systems in the three areas of the region serving 36 counties
- A 13-county maternal child health program

- Rural primary health care centers
- A mobile van for delivering health care services by Greene County Public Health Department to Greene, Hancock counties
- Health care services for the outlying rural areas in Washington, Unicoi, Johnson and Carter counties
- Programs for home nursing services in three areas of the region
- Emergency medical service system covering seven counties in Southwest Kentucky including upgrading of ambulance facilities, emergency rooms and training of participants.

\* \* \*

## Topics in Nuclear Medicine

(cont'd from p. 446)

Proceedings for the cost of surgical therapy of hyperthyroidism included one week in the hospital and a total of two weeks out of work, resulting in a total cost to the patient or third party of an estimated \$1700.00, which is between four and ten times as costly as radioactive iodine therapy of the thyroid gland in Graves' disease.<sup>10</sup>

ROBERT L. BELL, M.D.  
Director

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\*The entire extensive reference list may be obtained by interested readers on request to the editors, only the most important being printed here.



**from the  
executive  
director**

**J. E. BALLENTINE**

# **MEDICAL DIGEST**

**NEWS OF INTEREST TO DOCTORS IN TENNESSEE**

**TENNESSEE MEDICAL SCHOOLS RECEIVED \$39,161.59 . . .** The American Medical Association's Education and Research Foundation recently awarded checks to Tennessee's three medical schools . . . The University of Tennessee College of Medicine received \$21,318.35; Vanderbilt University School of Medicine, \$12,122.40; and Meharry Medical College of Medicine, \$5,720.84 . . . The checks were presented to representatives of the three medical schools by the TMA Committee on AMA-ERF during the first session of the House of Delegates at the State meeting in Memphis last month . . . The grants contain funds earmarked by donors for the medical schools as well as undesignated grants to the respective schools . . . A grand total of \$963,823.86 by earmarked donors and undesignated grants were made to medical schools in the United States and Canada. The grants to Tennessee schools includes all of the 1972 contributions to the AMA-ERF Fund contributed by designating physicians, the Woman's Auxiliary, medical societies and other sources, to the three schools in Tennessee . . . Of the participating fifty states and the District of Columbia medical associations, Tennessee contributed the sixth largest amount to the foundation (\$39,161.59). Only the large populous states of California, Illinois, New York, Ohio and Pennsylvania made larger contributions.

\* \* \*

**COMMUNICATIONS PROGRAM ON PSRO's . . .** In view of the impact that Professional Standards Review Organizations will have on the practice of medicine, TMA will undertake a communications program immediately. Through a resolution presented to the House of Delegates, every county medical society in Tennessee is urged to establish a council or committee that would keep local physicians informed, and knowledgeable, toward the formation and operation of a Professional Standards Review Organization in the district where such counties may be included . . . State or county medical societies per se cannot function directly as PSRO's, but may be instrumental in developing organizations which can function in a PSRO capacity under provisions of the law . . . The medical profession must exert responsible leadership in development and operation of PSRO's to assure a proper role for physicians in the review procedures, and the continuing availability of quality health care services for the public . . . The resolution presented to the House of Delegates called for every county society to immediately establish a council or committee to receive informational materials and guidelines relating to the functions of PSRO's, and that an officer, committee chairman or member of such a committee, be designated and made known to the state medical association to receive information so that physicians in every county medical society throughout the state may be kept informed and knowledgeable on all activities of PSRO proceedings.

\* \* \*



**AMA MEMBERSHIP INCREASES IN 27 STATES . . .** 27 state medical associations received Membership Achievement Awards for increasing their AMA membership during 1972 . . . The Tennessee Medical Association was among the 27 state associations recognized. The awards were presented at the AMA National Leadership Conference in Chicago in February.

\* \* \*

**BOARD CERTIFICATION ENTITLES PHYSICIANS TO RAISE FEES . . .** The American Medical News reports that the Price Commission ruled that a physician may raise his fees after board certification . . . Attainment of board certification in a medical specialty has traditionally been considered as a highly significant professional attainment which substantially increases the physician's professional status and value of his services . . . The physician may determine his base price by referring to the average fee charged by other certified specialists in his marketing area, and he may charge a fee in excess of his new base price to reflect a liable cost increase, the Commission declared. The News reported it is reasonable to expect that an individual's services will be substantially higher quality after he achieves a significant educational advance in his field. Only those educational achievements which are recognized in the individual's profession as significantly enhancing the value of his services will be regarded as giving rise to a new quality service, according to the Commission. It is reported that the decision was based on an IRS decision, and was not considered by the Health Services Advisory Committee. The complete article appeared in the American Medical News October 16, 1972.

\* \* \*

**CATASTROPHIC COVERAGE . . .** The Medical News Report reveals that catastrophe coverage continues to be popular among sponsors of legislation for a national health care program. It's covered in the Kennedy-Griffiths Bill, in the Medicredit Bill backed by AMA, in the National Health Care Act introduced for the insurance industry, in other legislation and will undoubtedly appear in whatever legislation is introduced by the national administration . . . Legislation to protect Americans from heavy financial burden of catastrophic illness or injury may yet prove to be only acceptable compromise that both houses of Congress can agree on during this session.

\* \* \*

**MEDICAL AND HEALTH CAREERS . . .** College freshmen are showing increased interest in medical and health careers, the American Council on Education reports. ACE surveys show 5.5% of 1972 freshmen said their probable career was physician or dentist, compared to 4.4% in 1971 and 3.7% in 1968 . . . Nursing careers were indicated by 4.7%, compared to 4.1% in 1971 and 2.7% in 1968. Other health professions were preferred by 7.3% in 1972, compared to 4.1% in 1968 . . . There will be 408,000 physicians in the United States by 1980, according to the projection in the President's Budget Message to Congress. This will be an increase of 27% during 1971-1980. National aggregate physician-to-population ratio, as projected to 1980 would be 180 per 100,000. At the end of 1971, according to AMA, the ratio was 163 per 100,000.



public  
service



## COMMUNICATIONS • LEGISLATION

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**STATUS OF MAJOR NATIONAL HEALTH LEGISLATION . . .** Because of the tremendous number of health related bills introduced in Congress, the following AMA Report outlines the status of major health proposals:

<u>Bill No.</u>	<u>Description</u>	<u>Status</u>
H.R. 50 Roy	Establishes an Office of Rural Health Care in HEW to administer and coordinate rural health care programs.	Referred to Interstate and Foreign Commerce Committee
H.R. 51 Roy	<u>Health Maintenance Organization Act of 1973</u> : Provides federal aid for development, establishment, and operation of HMO's.	Hearings before House Subcommittee on Public Health and Environment; 3/6/73; 3/7/73
H.R. 1058 S. 423 Rogers Ribicoff	To create a cabinet level Department of Health.	Referred to Senate Labor and Public Welfare and House Interstate and Foreign Commerce Committee
H.R. 5640 Rogers	<u>National Health Research Fellowship and Traineeship Act of 1973</u> : Establishes a program of health research fellowships through NIH.	Hearings before House Subcommittee on Public Health and Environment; 3/20/73; 3/22/73
S. 7 Randolph	<u>Rehabilitation Act of 1973</u> : Extend program of grants for rehabilitation services.	Vetoed 3/27/73
S. 14 Kennedy	<u>Health Maintenance Organization and Resources Development Act of 1973</u> : Provides federal aid for development, establishment, and operation of HMO's and other health delivery systems; also provides a system of malpractice insurance and arbitration.	Ordered reported by Senate Health Subcommittee
S. 50 Eagleton	<u>The Older Americans Comprehensive Services Amendments of 1973</u> : Establishes Administration on Aging.	Senate passed 2/20/73; House passed 3/13/73 (substituting language of H.R. 71).



<u>Bill</u>	<u>Description</u>	<u>Status</u>
S. 59 Cranston	<u>Veterans Medical Care Act of 1973:</u> Provides expansion of medical care to veterans; provides hospital and medical care to certain dependents and survivors; improves recruitment of career personnel.	Senate passed 3/6/73; Hearings before House Subcommittee on Public Health and Environment; 3/27/73
S. 504 Cranston	<u>The Emergency Medical Services Systems Development Act of 1973:</u> Authorizes federal aid to emergency medical service systems through Hill-Burton program.	Hearings before Senate Health Subcommittee; 1/31/73 and 2/1/73
S. 607 Kennedy	To extend programs to eliminate hazards of childhood poisoning caused by lead based paints.	Reported by the Senate Health Subcommittee; 1/30/73
S. 654 Beall	<u>The Emergency Medical Services Systems Act:</u> Authorizes federal assistance to community developed emergency medical services.	Hearings before Senate Health Subcommittee; 1/31/73 and 2/1/73
S. 972 Javits	<u>Health Maintenance Organization Act of 1973:</u> Provides assistance for the development of HMO's.	Referred to the Committee on Labor and Public Welfare
S. 1125 Hughes	<u>Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act Amendments of 1973:</u> Calls for three year extension of alcohol abuse control programs.	Referred to the Committee on Labor and Public Welfare
S. 1136 Kennedy	<u>The Public Health Service Assistance Extension Act of 1973:</u> Authorizes a one year extension of certain expiring PHS programs.	Senate passed 3/27/73
S. 1143 Humphrey	<u>The Social Security and Medicare Reform Act of 1973:</u> Eliminates Part B Medicare premium and modifies Medicare financing.	Referred to the Committee on Finance
S. 1191 Mondale	<u>Child Abuse Prevention Act:</u> Establishes National Center on Child Abuse; assist prevention programs.	Referred to the Committee on Labor and Public Welfare

#### National Health Insurance

The following national health insurance bills have been introduced, but no hearings have been scheduled:

H.R. 1, National Health Care Services Reorganization and Financing Act (Ullman)

H.R. 22, S. 3, Health Security Act (Griffiths, Kennedy)

H.R. 33, National Health Insurance Act (Dingell)

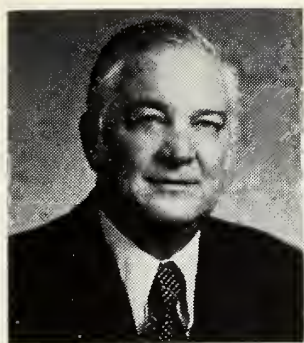
H.R. 2222, S. 444, Health Care Insurance Act of 1973 (Medicredit) (Fulton, Broyhill, Hartke, Hansen)

S. 587, National Catastrophic Illness Protection Act of 1973 (Beall)

S. 915, National Health Insurance and Health Service Improvement Act (Javits)

H.R. 5200, S. 1100, National Health Care Act of 1973 (Burleson, McIntyre)





MORSE KOCHTITZKY

## president's page

In this my first monthly message to the membership, I will be bringing to your attention timely issues affecting every physician in the practice of medicine in Tennessee.

As those of you realize who attended the TMA Annual Meeting in Memphis last month that the next few years will present to our profession startling changes in the socio-economics of medicine. This is not to deny that such major academic changes as those in the medical school curricula, and our need for continuing medical education are not paramount to our continued well being. In addition, the areas of which we must be concerned will be such issues as PSRO's, National Health Insurance, how to use foundations for utilization review, new and innovative ways to deliver health care, how to solve the mal-distribution of physicians, and other related situations.

It seems incongruous that we should have to divert our efforts from teaching, research, and patient care to what seems to be more conomic problems, yet these changing times have put us in this position. It is true that we may not have done the best possible job of delivering health care to all of those who need our help. It is also true that we have done a better job than any other country in the world, and it is a fact that health care is available within a very short time and distance to all in this country who desire to avail themselves of it.

You can tell that in the pages of this publication and many similar ones, that you will in the future be seeing more socio-economic subjects as compared to scientific information which we are more attuned to in our journals. This, then, necessitates your help, cooperation and involvement. It is imperative that every physician keep himself informed with respect to these matters, and one of the best ways to do it is to be active in your county and state medical organizations. We cannot all be delegates to the AMA, but we can all influence the thinking of the House of Delegates of TMA, and county societies are represented in the TMA, not only in our Annual Session, but on the committees that conduct the day-to-day work of your state medical association. Your active interest and support when called upon are vital in these areas. In the legislative arena, contact physicians are of inestimable value in influencing legislation which currently affects all of us. Your participation in both IMPACT and AMPAC is vital to the very existence of the freedom of medical practice.

You can assume we will of necessity call on you through these coming months for help, and we feel confident that we can count on your cooperation.

Sincerely,

A handwritten signature in dark ink that reads "Morse Kochtitzky". The signature is written in a cursive, flowing style with a large, prominent "M" and "K".

President



# Journal

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MAY, 1973

# editorials

## "PERSONS" vs. "PEOPLE"

A profoundly significant statement occurs in the *JAMA* editorial "Insane: Sane,"<sup>1</sup> the second of two editorials based on the study by D. L. Rosenhan "On Being Sane In Insane Places."<sup>2</sup> The statement: "Privacy is minimal, even at times in matters of personal hygiene. These and other influences in psychiatric hospitals that housed Rosenhan's pseudopatients caused intense depersonalization even though they knew they did not belong there."

This is fairly characteristic of statements which are widely recurrent these days referable to a variety of settings, but having to do in recent years particularly with doctors and medical facilities. Patients often have tended to feel, not without justification, that they have become simply "cases," and there is a great deal of nostalgia for the good ol' days and the good ol' family doc, who treated the patient like a person

(even though he may not have had much else to offer).

A recent account, a sort of tear jerker, by the wife of a dying patient who was in and out of a hospital over a period of several months, told of his efforts to humanize his hospital experience, complaining of a lack, or apparent lack, of compassion on the part of doctors and nurses (often a protective shell), and of their avoidance of voice or even eye contact (a complaint, incidentally, of Rosenhan's pseudopatients). We hear pleas of patients and others for the right to die with dignity. All this is a fight against one thing: depersonalization.

It is indeed strange that at a time when "people" are insisting that they be "persons"—individuals distinct from the masses—medical care is being forced hell-bent on a course which could not be more effectively calculated for depersonalization.

The most distinctive prototype of the HMO (health maintenance organization) that I personally know anything about is the military. While my experience is of World War II vintage, I doubt it has changed much. If I ever saw depersonalization, that was it: no choice of doctors, no choice of facilities, no voice in anything—just being one of the herd, with no one even to give you the time of the day. And one of the disadvantages of HMO's we didn't have—lack of funds. All of the operations now in existence, including Kaiser-Permanente, are underfunded. Consultations with specialists outside the group are discouraged as being too expensive, and special procedures, when available, are often withheld to save money. There is seldom time for much interpersonal exchange.

Sweden is often cited as having one of the best medical care systems in the world,<sup>3</sup> and is being touted as a model to emulate. And yet there is no such thing as any meaningful doctor-patient relationship in Sweden, as the patient seldom sees the same doctor twice. He is coldly and efficiently shuttled about from place to place, from one specialized center to another. What few family doctors as still exist are not allowed to admit patients to the hospital, but must defer to the full time hospital specialist, who is well versed in the patient's medical problems, but knows little about him as a person.

We have in this country the potential for maintaining not only a system of medical care of the highest quality, but also one in which



there can be a truly satisfying doctor-patient relationship. But it requires effort on our part. First, we must never let our patients become simply a case, even when if we are specialists we see them only briefly. This is a part of the art of medicine, and it is a real challenge to be able to keep the art and the science in perspective. Second, we must be careful of our office personnel. The success of the Mayo Clinic has depended to a considerable degree on their philosophy which says, "If you can't be pleasant and kind to the patients, we'll help you find a job elsewhere. You don't belong here." And third, we must set an example for the hospital personnel. There *may* be a few "impossible" nurses or ward aides or house officers, but mostly they take their cue from the medical staff. Land with both feet on the nurse, and chances are she'll pass it on.

We are responsible for the public image of medicine, whether we like it or not, or even deserve it. And this applies also in the patient's mind to his hospital experience and what it cost—things on which you may have had little influence. Little things make a lot of difference to a patient (as to any of us), and very high in that category is whether he was a person or a number. If the American people think our system is worth preserving, it will be preserved. If not, the reverse will be our lot. Mostly, it's up to us.

#### REFERENCES

1. Editorial. Insane: Sane. *JAMA* 223:1381, 1973.
2. Rosenhan DL. On Being Sane in Insane Places. *Science* 179:250, 1973.
3. Andrews, JL, Jr. Medical Care in Sweden. *JAMA* 223:1369, 1973.

J.B.T.

### How to Beat the Rap

A high priority function of this journal, as I am sure you are by now aware, is keeping you up to date on what is happening in continuing medical education: reasons for the need for it, methods and techniques of accomplishing it, and the activities of your CME Committee. It is certainly not our intent to further complicate your already complicated practice, though this may sometimes seem to be the effect.

Prominent among factors complicating medical practice is the presence of government programs and agencies, third party carriers, legislation, and our own accrediting bodies, a seemingly disparate group, but one which on

examination proves to have a common ground—sensitivity to public demand for increased quality and decreased cost for what they consider their right: medical care (or, as some would have it, "health" care). Current emphasis on continuing medical education is largely an outgrowth of these pressures.

Part of our problem is the rapidity of change and the uncertainty of relationships with these groups. We have witnessed not only the gestation and birth, but the impending demise of such government sponsored programs as neighborhood health centers, RMP, the U.S. Public Health Service and Hill Burton, as well as changes in function and status of Medicare, Medicaid, the NIH, Bureaus, Departments, Divisions and Sections, and so on and so forth. There has been a resurgence of Family Practice and the rapid growth of group practice. And now we have Peer Review and PSRO, HMO, and we face some form of National Health Insurance or Security—the number of the bills, with their names and sponsors, boggles the mind.

Unfortunately we cannot stand back and watch all this dispassionately, as it impinges directly on our practice in two critical areas—our time and our money—because all of this requires among other things committee work and record keeping. If we can find a way to decrease these, we are ahead of the game.

This is one reason that your CME Committee has urged you to adopt PAS/MAP, or some similar data system, the other reason being to establish a data base for an educational program. Last fall we sponsored, with the two RMP's in the state, a series of seminars on PAS/MAP, held by Dr. William Robinson. A number of people who heard Dr. Robinson asked if we could publish some of his remarks. It happened that he had already submitted a paper on them to the American Hospital Association. We are pleased to reprint the paper, with their permission, as an account of how two hospitals met and solved the problem of proliferating committees and record keeping, instituting at the same time a very meaningful program of continuing education.

J.B.T.

### GUEST EDITORIAL

#### Do You Get Too Many Magazines?

Yes you do. You can't read all of the stuff that piles up on your desk. There's probably



something good in every one of the magazines you get, or at least something that might be interesting, even if it's produced by Madison Avenue experts and not by physicians. So you feel guilty because you don't read them. Then you reject them all, including those in which you have a real stake. The situation has become intolerable and you're reacting as a normal human being.

You should know that this problem, like many others, has developed on the basis of dollars. The pharmaceutical manufacturing industry is currently spending \$100,000,000 annually on advertising. That is the gold mine from which the dollars come and any one who has a new idea for a magazine to send to doctors can dig. They do, to the tune of about \$80,000,000 per year. The number of magazines developed to send to doctors has increased, during the past few years, to the point that they are destroying their own purpose. The unfortunate part of this situation is that, unless members of medical associations realize what is actually happening, they will destroy also the scientific journals owned and controlled by physicians. In resentment, physicians are apt to say, "A plague on all of your houses" and try to get rid of the good, the mediocre and the poor, all at once. But the wisdom of such reaction is open to question.

In the practice of medicine, you don't generalize—you individualize. It might be wise to look at medical journals with the same kind of discrimination. You should realize that it costs money to publish anything. And you should know where the money comes from, what it does, and how to get what you want without increasing the part you pay. Most of the money required for publication of a medical journal comes from advertising—at least three-fourths of it. But the money that might be used to make your own journals better is going to the magazines in the controlled circulation class—usually described as *throwaways*. They get the \$80 million; scientific journals are getting the \$20 million that is left after most of the available \$100 million has been distributed to the publications you get at no direct cost to you. Your cost is diminished ability of your own journals to give you the kind of publications you ought to be getting. It's up to you to decide which way you want to go—to magazines aimed at superficial interest, produced by non-physicians, or to journals given careful supervision by committees of

physician critics, publishing articles by competent physicians, most of whom are known to you. When they live in your own region, you're soon aware of whether or not they know what they are talking about. Can you make that kind of check on the throwaways?

If you're fed up with the mass of published material coming your way there are two things you can do. First, you can talk to every detail man you see, telling him that you are supporting your own regional journal and that you think his firm should spend its advertising dollars where they will do you the most good. Second, you can hand a specific publication back to the postman, telling him that you refuse to accept it. Postal regulations require that the publisher then be notified. He will probably take your name off the list—each such notice from the postoffice costs him ten cents.

HERBERT L. HARTLEY, M.D.

Reprinted from *Northwest Medicine*  
March, 1973



CAPPS, JOE MELVILLE, SR., Nashville, died March 18, 1973, age 47. Graduate of University of Tennessee School of Medicine, 1946. Member of Nashville Academy of Medicine.

CLARK, WILLIAM E., Knoxville, died March 12, 1973, age 64. Graduate of University of Tennessee School of Medicine, 1934. Member of Knoxville Academy of Medicine.

FLANIKEN, ROBINSON BEARD, Memphis, died March 11, 1973, age 89. Graduate of University of Tennessee School of Medicine, 1910. Member of Memphis-Shelby County Medical Society.

POTTER, WILLIAM WALTER, SR., Knoxville, died March 11, 1973, age 89. Graduate of University of Tennessee School of Medicine, 1904. Member of Knoxville Academy of Medicine.

QUINN, ARTHUR GARDNER, Scottsdale, Arizona, died March 11, 1973, age 81. Graduate of University of Tennessee. Former member of Memphis-Shelby County Medical Society.

SMITH, W. EIDSON, Knoxville, died March 10, 1973, age 55. Graduate of Cornell University School of Medicine, 1943. Member of Knoxville Academy of Medicine.



## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### **BENTON-HUMPHREYS COUNTY MEDICAL SOCIETY**

Keith D. Peterson, M.D., Waverly

### **COFFEE COUNTY MEDICAL SOCIETY**

Ho Kyun Kim, M.D., Tullahoma  
Seung Hoo Lee, M.D., Manchester

### **CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE**

N. Bhat, M.D., Huntingdon  
James F. Bradley, Jr., M.D., Trenton  
Wayne H. Wolfe, M.D., Jackson

### **McMINN COUNTY MEDICAL SOCIETY**

Charles T. Carroll, M.D., Athens  
William M. Davis, M.D., Athens

### **MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY**

William L. Cole, III, M.D., Memphis  
Jere M. Disney, M.D., Memphis  
James H. Hendrix, Jr., M.D., Memphis  
Thomas W. Higginbotham, M.D., Memphis  
James H. Leigh, Jr., M.D., Memphis  
John E. McIntosh, M.D., Memphis  
Martin D. Palmer, M.D., Memphis  
Michael C. Thomas, M.D., Memphis

### **NASHVILLE ACADEMY OF MEDICINE**

Zillur Athar, M.D., Madison  
Daniel R. Hightower, M.D., Nashville  
John B. Lynch, M.D., Nashville  
C. Eugene Peery, Jr., M.D., Nashville  
Robert I. Roelofs, M.D., Nashville  
Gaylon R. Rogers, M.D., Nashville

## programs and news of medical societies

### **Knoxville Academy of Medicine**

The Academy met April 10 at the KAM building and was privileged to view the film "Three Days in February" which was produced by the American Medical Association for the opening session of the 1973 Leadership Conference.

### **Nashville Academy of Medicine**

The Board of Directors met March 27 at the TMA Building and took the following actions: (1) Adopted, with revisions, recommendations of the Alcoholism

and Drug Abuse Committee regarding drug over-prescribing by physicians; (2) reviewed Academy office policies for administrative personnel; (3) approved implementation of a membership recruitment program; (4) directed that the Academy contact local hospital administrators to inquire into possibility of unified auto sticker for physicians.

## national news

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

The Administration has notified the American Medical Association it is "prepared to review thoroughly the regulations governing the medical profession" in the Phase 3 controls that continue the limits on physicians' fee increases.

The Administration's letter avoided a direct reply to the AMA's petition of January 15 to President Nixon urging that physicians be exempted from the Phase 3 controls as has been most of the rest of the economy.

John Dunlop, director of the Cost of Living Council, said the President had asked him to respond to the AMA letter. Dunlop said "having assumed responsibility for the economic stabilization program last month, I am now prepared to review thoroughly the regulations governing the medical profession."

"As you know," wrote Dunlop to John R. Kernodle, M.D., Chairman of the AMA Board of Trustees, "the health field has been persistently among the most inflationary areas in our economy, and I am sure it is our goal to alter that trend."

The AMA had told the President that physicians' fees rose only 1.7 per cent during the first 12 months of Phase 2. ". . . we have surpassed the original expectations," said Dr. Kernodle in the AMA letter to the President. "In view of our demonstrated success during the past year, you can imagine our dismay . . . that the medical profession has once again been singled out under special controls."

Dunlop's letter did not mention the AMA's request for a meeting with President Nixon and his top economic advisers to discuss the issue.

In his letter to Dr. Kernodle, Dunlop said: "We are presently in the process of appointing members of the new Health Industry Advisory Committee and I assure you that the views of physicians will be represented on that commit-



tee. As soon as an executive director for the committee is named, I will have him contact you for suggestions on how best to meet our goals for controlling health care costs under Phase 3.

"Meanwhile, I know the federal government can count on your cooperation in following the legal requirements now in effect, and I look forward to working with you to evaluate new alternatives."

\* \* \*

The use of human subjects in medical research is essential for the benefit of society despite the fact that it will place some participants at a calculated disadvantage, the American Medical Association told Congress.

The AMA comments were made to Senator Kennedy's Senate health subcommittee in hearings on the subject of human experimentation and if a need exists for federal legislation to forestall abuses.

William R. Barclay, M.D., Assistant Vice-President of the AMA, told the senators that, "The practice of medicine is both an art and a science, and we are constantly seeking new means to improve the quality and length of life. The evolution of sound medical practice through the years has reduced the incidence of pain and has done much to advance the cause of human dignity. These procedures, however, today as always, require the weighing of risk against benefit at every level of professional discretion. It is evident that there is a certain degree of risk attendant to any medical procedure.

"But if we are to continue to improve our high standards of patient care, we must maintain our initiatives in biomedical research. The accomplishments of modern medical practice testify to the merits of continued research. Such advances are hard won, but the benefits are beyond question.

"Medicine as a science must conduct experimentation if it is to progress rather than stagnate. Experimentation is an essential principle of all sciences, be they biological or physical. Scientific experiments are conducted both to test new hypotheses and to reexamine the validity of accepted hypotheses.

"A medical experiment with human subjects is sometimes referred to as a clinical trial. As such it should be a test of a reasonable hypothesis based on sound laboratory data. It should not be a random groping for information. A well designed clinical trial has elements

in its design which assure that it will be a useful and a justifiable undertaking.

". . . A human experiment, by its very nature, establishes a set of circumstances which will place some of the participants at a calculated disadvantage. Generally a trial is established to answer the question, 'Is treatment A better than treatment B?' No definitive answer to this question can be obtained until the test is conducted over an adequate period of time and sufficient data has been gathered by which to measure the relative response of the subject.

". . . Through the process of clinical investigation, which we have described here, drugs and procedures become available for widespread usage in patient care.

". . . We note that it is the Committee's hope that these hearings will encourage continued support of and advancement of biomedical research. If we are to continue to increase our knowledge and continue to improve medical care for the benefit of society, medical research using human subjects is essential," Dr. Barclay concluded.

\* \* \*

The Council on Foods and Nutrition of the American Medical Association has labeled the dietary recommendations of the current best-seller book, "Dr. Atkins' Diet Revolution," as unscientific and potentially dangerous to health.

The book recommends a sharply restricted intake of carbohydrates to lose weight. The author is Robert C. Atkins, M.D., of New York City.

"The 'diet revolution' is neither new nor revolutionary," the AMA Council declared in a formal statement analyzing the book's recommendations.

"It is a variant of the 'familiar' low carbohydrate diet that has been promulgated for years. The rationale advanced to justify the diet is, for the most part, without scientific merit."

Even more serious: "The Council is deeply concerned about any diet that advocates an 'unlimited' intake of saturated fats and cholesterol-rich foods (Another aspect of the Atkins diet)."

Individuals responding to such a diet with a rise in blood fats will have an increased risk of coronary artery disease and atherosclerosis (hardening of the arteries), particularly if the diet is maintained over a prolonged period, the Council said.



The book states that the diet promotes production of a "fat mobilizing hormone" (FMH) . . . "and the production of FMH is the whole purpose of this diet—and the reason it works when all other diets fail." According to Dr. Atkins, "FMH releases energy into your bloodstream by causing the stored fat to convert to carbohydrate."

No such hormone as a "fat mobilizing hormone," has been established in man, said the AMA Council. In addition, no appreciable conversion of fat to carbohydrate occurs in the human body.

"Any grossly unbalanced diet, particularly one which interdicts the 45 per cent of calories that is usually consumed as carbohydrates, is likely to induce some anorexia (loss of appetite) and weight reduction if the subject is willing to persevere in following such a bizarre regimen. However, it is unlikely that such a diet can provide a practicable basis for long-term weight reduction or maintenance, namely, a life-time change in eating and exercise habits," the Council declared.

The Council urged physicians to counsel their patients as to the potentially harmful effects of the Atkins diet.

"It is unfortunate that no reliable mechanism exists to help the public evaluate and put into proper perspective the great volume of nutritional information and misinformation with which it is constantly being bombarded," the Council statement said.

The Council declared that publishers and writers who advise the public on diet and nutrition "Have a unique responsibility to insure that such information and advice is based on scientific facts established by responsible research."

\* \* \*

It appears likely that Congress this year will pass legislation to improve emergency medical services throughout the nation. Both the Senate and the House have opened hearings on several bills that would provide federal funds to assist local governments in improving ambulance and emergency room services.

Among the major bills addressing themselves to emergency medical care is one developed by the AMA. Sponsored by Senator J. Glenn Beall (R-Md.) and by Representative James Hastings (R-N.Y.), the AMA bills (S 654 and H.R. 4952) provide for the establishment of a

comprehensive emergency medical system across the nation. Direction and financial assistance would be at the federal level, however the programs would be developed at the community level.

There are currently seven two-year emergency residency programs in operation. Beginning on July 1, 1973, there will be an additional seven residency programs operational. In addition, there are three institutions conducting short-course training programs in the field of emergency medicine.

\* \* \*

While the abuses of alcohol, heroin and other drugs show no signs of disappearing soon and may even increase, drugs do not threaten to destroy society, the National Commission on Marijuana and Drug Abuse has told Congress and President Nixon.

Making more than 100 recommendations to de-emphasize government involvement in the drug field, which the panel sharply criticized, and re-emphasized family, church and community involvement, the 481-page report concluded:

—"The Commission sees little evidence of any decline in the rate of experimental use, particularly of marijuana and hallucinogenic drugs, by young people . . . Youthful experimentation will remain one of the most difficult aspects of the drug problem."

—"The Commission does not anticipate a quick end to the heroin problem. A large segment of the current heroin-dependent population resists any form of treatment while new users continue to be recruited."

—"The Commission does not anticipate the imminent discovery of a cure or vaccine for drug dependence. Compulsive drug use does not seem to be the kind of phenomenon for which science will discover a 'magic bullet.'"

—"The Commission foresees a possible continuing increase in the already extensive phenomenon of circumstantial use, slowed only by reduced availability of specific substances within legitimate medical channels. Only an effective long-term policy can forestall or diminish this development."

—"The drug problem, as perplexing and extensive as it is, is not going to bring about the collapse of our society. We will make some progress in dealing with it, but we should not harbor unrealistic hopes for the future."



The report by the high-level Commission, which a year ago recommended that all criminal penalties for personal use and possession of marijuana be abolished, came as the White House announced plans to group all federal drug law enforcement under one agency in the Justice Department.

\* \* \*

Senator Thomas McIntyre (D-N.H.) and Representative Omar Burleson (D-Texas) introduced the National Health Care Act of 1973, the plan developed by the private health insurance companies.

The 1973 proposal provides catastrophic health insurance for every individual up to \$250,000. Any person who incurs \$5,000 or more in medical expenses during a 12-month period would be eligible for up to \$250,000 in benefits, even if some or all of his expense is reimbursed by insurance. McIntyre and Burleson said this new provision answers a major health fear of millions of Americans—fear of catastrophic illness or injury.

Cost to the government in new revenues would be \$8.1 billion. The bill provides tax disincentives for employers whose group plans don't meet standards and tax incentives for individuals not belonging to groups to encourage purchase of insurance. State pool plans are provided for the poor and near poor.

The health insurance industry bill now brings the count of major national health insurance proposals to three . . . AMA's Mediredit plan and the sweeping proposal of organized labor were introduced earlier. Still to be seen is this year's proposal of the Nixon Administration.

## medical news in tennessee

### Health Project Contest Winners

Mt. Pleasant High School in Mt. Pleasant, Tennessee has been named 1st place winner in the 20th Annual Health Project Contest, sponsored by the Tennessee Medical Association (TMA) and the Woman's Auxiliary to TMA.

The winning entry, entitled "Rubella," was submitted by the school's Senior Beta Club.

Two student representatives and their project sponsor were guests of TMA during the 138th Annual Meeting in Memphis, April 11-14. They

were presented the \$500 first place award at the President's Banquet on Friday evening, April 13.

The second place award of \$300 was won by the Girls' Preparatory School in Chattanooga, winner of the 1972 contest, for their project entitled "Ecological Consumerism," submitted by the 10th-12th grade Biology students.

Brainerd Senior High School was the third place \$200 winner for their entry, "Water Pollution" submitted by the Medical Careers Club. The \$150 fourth place award went to St. Cecilia Academy in Nashville for their project entitled "Smoking." The 9th grade Science class of Wooddale Junior High School in Memphis submitted the entry receiving the fifth place award of \$100. Their project was entitled "Effects of Venereal Disease."

## personal news

DR. RANDOLPH BATSON, Nashville, has been named Vice-chancellor for Medical Affairs Development, a new fund raising post at the Vanderbilt University School of Medicine.

Physicians who have completed educational requirements for re-election to membership in the American Academy of Family Physicians are: DR. JAMES I. ELLIOTT, Bolivar; DR. JAMES O. FIELDS, Milan; DR. RUSSELL W. MAYFIELD, Bells; DR. NATHAN F. PORTER, Greenfield; DR. EDWARD WELLES, JR., Dresden; DR. CHARLES W. WHITE, Lexington; and DR. TOM WOOD, Paris.

DR. C. HARWELL DABBS, formerly of Knoxville, has become full time member of the medical staff in general and thoracic surgery at Chamberlain Memorial Hospital in Rockwood. He also has joined the Rockwood Medical Group.

DR. TAYLOR FARRAR, Shelbyville, has joined the State Health Department as a staff clinician.

DR. HOWARD R. FOREMAN, Nashville, has been installed president of St. Thomas Medical Staff.

DR. EUGENE W. FOWINKLE, Nashville, was the feature speaker at the annual meeting of the Tennessee Public Health Association in Gatlinburg in March.

DR. JAMES W. HALL, Trenton, has been named to the Medical Advisory Staff of Extendicare, Inc.

DR. ROBERT P. HORNSBY, Knoxville, spoke to the Knoxville Society of Dieticians in February on the subject "Food and Drug Interactions."

DR. CECIL F. MYNATT, Louisville, has resigned his position as Clinical Director of Peninsula Psychiatric Hospital in Louisville.



# announcements

## CALENDAR OF MEETINGS STATE

- May 17 Middle Tennessee Medical Association, Blue Grass Country Club, Hendersonville
- June 19-20 Upper Cumberland Medical Society, Red Boiling Springs

## NATIONAL

- May 16-20 American Pediatric Society, Hilton Hotel, San Francisco
- May 21-24 American College of Obstetricians and Gynecologists, Americana Hotel, Bal Harbor, Fla.

- May 21-24 American Thoracic Society, Statler Hilton Hotel, New York
- June 10-14 American Proctologic Society, Detroit Hilton Hotel, Detroit
- June 14-16 American Electroencephalographic Society, Statler Hilton, Boston
- June 16 American College of Preventive Medicine, New York
- June 20-22 Endocrine Society, Sheraton-Chicago Hotel, Chicago
- June 23-24 American Diabetes Association, Drake Hotel, Chicago
- June 24-27 American Association of Plastic Surgeons, Waldorf-Astoria, New York
- June 24-28 American Medical Association, Americana Hotel, New York



## continuing education opportunities

### Meharry Medical College CME Courses

The following continuing education courses are being offered by the Meharry Medical College during 1973:

- May 23-24 13th Annual Seminar in Psychiatry, Location to be announced, Vergil Metts, M.D., (Sponsored jointly with Vanderbilt Univ.)
- May 25-26 The Family Physician and the Emotionally Ill Patient, Learning Resources Center, Jeanne Spurlock, M.D.
- November 3 Radiation Technology, Learning Resources Center

### Vanderbilt University CME Courses

- | <i>Date</i> | <i>Title, Location, Program Coordinator</i>   |
|-------------|---|
| May 23-24   | 13th Annual Seminar in Psychiatry, Location to be announced, Vergil Metts, M.D.                                   |
| July 11-12  | Kentucky Medical Association, Annual Meeting, Lake Barkley, Kentucky  |
| Sept. 19-21 | Endocrinology (American College of Physicians) Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.            |
| Sept. 26-28 | The Injured Child (American Academy of Orthopedic Surgeons) Underwood Auditorium, Vanderbilt, John Connolly, M.D. |
| Oct. 10-12  | Hypertension (American College of Cardiology) Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.           |
| Oct. 25-27  | Child Neurology, Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.  |

### University of Kentucky College of Medicine

- | <i>Date</i> | <i>Title, Location, Program Coordinator</i>                                    |
|-------------|--|
| May 24-25   | Annual Pediatric Review, U.K. Medical Center, Nancy Holland, M.D.              |
| June 1-2    | Drugs and Techniques in Anesthesia, U.K. Medical Center, John E. Plumlee, M.D. |

### 1973 POSTGRADUATE COURSES

These courses are arranged through the cooperation of the directors and the institutions involved. Registration forms and requests for information are to be directed to: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104. Tuition Fees: ACP Members and Fellows, \$80; Non-Members, \$125; Associates, \$40; Other Residents and Research Fellows, \$80.

- | <i>Date</i>   | <i>Title and Location</i>   |
|---------------|---|
| May 21-25     | INTERNAL MEDICINE: CURRENT CONCEPTS OF CLINICAL PROBLEMS, University of Cincinnati Medical Center, Cincinnati, Ohio |
| May 21-25     | INTENSIVE CARE UNITS, St. Vincent's Hospital and Medical Center of New York, New York, N.Y.                         |
| May 29-June 1 | RECENT ADVANCES IN ENDOCRINOLOGY AND THEIR CLINICAL APPLICATIONS, Royal Victoria Hospital, Montreal, Que., Canada   |
| June 4-8      | HEMATOLOGY, University of Washington School of Medicine, Seattle, Washington  |
| June 13-15    | ONCOLOGY AND CHEMOTHERAPY, University of Southern California, Los Angeles, California                               |



- June 18-22 CLINICAL ASPECTS OF BLOOD TRANSFUSION, Michigan State University, East Lansing, Mich.
- June 25-29 ADVANCES IN INTERNAL MEDICINE: RECENT PERSPECTIVES, 1973, Banff, Alta, Canada

### **American Board of Family Practice Sets Certification Exam Date**

The American Board of Family Practice announces that it will give its next two-day written certification examination on October 20-21, 1973. It will be held in various centers geographically distributed throughout the United States. Information regarding the examination can be obtained by writing Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506.

It is necessary for each physician desiring to take the examination to file a completed application with the Board office. Deadline for receipt of applications at the Board office is August 1, 1973.

### **National Health Council Offers Short Courses**

The National Health Council, through its Committee on Continuing Education announces ten short courses in 1973 selected for personnel of official, professional, and voluntary health agencies and organizations.

The course subjects will include: Comprehensive Health Planning, Consultation Skills, Community Organization in Health Care Services, Executive Development, Leadership Development, and Voluntary Health Agency in the Community.

The ten courses will be conducted by seven universities on various dates ranging from April through August 1973. Cooperating universities are: Columbia University (School of Public Health), University of Florida (College of Health Related Professions), George Williams College (Division of Social Work Education), Indiana University (Graduate School of Business), University of Michigan (School of Public Health), University of Oklahoma (Department of Health Administration and School of Health), and Washington University (Office of Conferences and Short Courses).

Descriptive brochures and other information on these courses may be obtained by writing to: Continuing Education Program, National Health Council, 1740 Broadway, New York, New York 10019.

### **Institute for Sex Research Summer Program in Human Sexuality, July 8-19**

Lecture course, forums on socio-sexual issues, sex counseling symposia, attitude-reassessment program, informal workshops. \$325 includes housing. Registration ends June 18.

Write: Institute for Sex Research  
416 Morrison Hall  
Indiana University  
Bloomington, Indiana 47401

### **The American College of Obstetricians and Gynecologists, Annual Clinical Meeting**

American College of Obstetricians and Gynecologists. May 21-24, Americana Hotel, Bal Harbor, Fla. New this year are postgraduate courses throughout the meeting as well as preceding it, and informal Curbstone Consultations with two authorities on each subject. New Self-Assessment Tests in Clinical Obstetrics and Clinical Gynecology. Registration fee for nonmembers, \$125.

Contact: Donald F. Richardson, Associate Director, American College of Obstetricians and Gynecologists, One East Wacker Drive, Chicago, Ill. 60601.

### **Southern Ob-Gyn Seminar**

The 19th Annual Ob-Gyn Seminar will be held again this year in Asheville, North Carolina at the Grove Park Inn, July 22 through July 27. Broad aspects and subjects in obstetrics and gynecology will be presented.

For registration information please contact the Secretary, Dr. George T. Schneider, 1514 Jefferson Highway, New Orleans, Louisiana 70121.

### **Annual Otolaryngologic Assembly October 20-26, 1973**

The Annual Otolaryngologic Assembly of 1973 will be held October 20 through 26, 1973, in the Eye and Ear Infirmary of the University of Illinois Hospital. This program is designed to bring to specialists current information in medical and surgical otorhinolaryngology.

Interested otolaryngologists should direct their inquiries to the mailing address: OTOLARYNGOLOGY, P. O. Box 6998, Chicago, Ill. 60680.

\* \* \* \* \*

A separate, but correlated course, "CONFERENCE ON RADIOLOGY IN OTOLARYNGOLOGY AND OPHTHALMOLOGY" will be held this year on Friday and Saturday, November 23 and 24, under the guidance of Galdino E. Valvassori, M.D. For further information about the radiology conference, write to Professor Valvassori, Radiology Department, Abraham Lincoln School of Medicine, P. O. Box 6998, Chicago, Illinois 60680.

### **Course in Laryngology and Bronchoesophagology**

The Department of Otolaryngology, Abraham Lincoln School of Medicine of the University of Illinois and the Eye and Ear Infirmary of the University of Illinois Hospital, will conduct a continuing education course in Laryngology and Bronchoesophagology November 12 to 17, 1973. The course is limited to twenty physicians and will be under the direction of Paul H. Holinger, M.D. It will be held largely at the Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, and will include visits to a number of other Chicago hospitals.

Interested physicians will please write directly to the Department of Otolaryngology, Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, Illinois 60612.



## Physicians, Future Shock and the AMA

RAYMOND T. HOLDEN, M.D., AMA BOARD OF TRUSTEES

"The AMA doesn't represent me."

That line—a top candidate for the most-abused-cliche-of-the-year award—is an excellent place, I believe, to begin a discussion of the relationship between the American Medical Association and physicians.

It is an excellent place to begin because it summarizes a basic attitude expressed by most non-members and some currently disgruntled members of the AMA. And it points up what I believe to be an inherent fallacy about that relationship—a fallacy born of misunderstanding of what the AMA really is.

For that statement, while undoubtedly true in many instances, is not valid. No organization of national scope represents the views of each of its members at all times—nor should it be expected to. That is an unreasonable expectation on the face of it. Yet many physicians seem to demand just that of the AMA.

But there is an even more serious defect in such an argument. For while the AMA does offer the individual physician certain benefits relating to his personal and professional life, that is not the reason it exists.

The American Medical Association exists and functions, not to serve the particular interests of the individual physician, but to serve and represent the general interests of the profession.

How is this service and representation to be defined? How are these objectives to be achieved? What do they mean in terms of the relationship between the AMA and the physician, the government, the public?

The AMA is asking itself those very questions right now. And the answers are in a process of redefinition, for the AMA is undergoing a period of quiet, structured, evolutionary change. It is responding to the clearly evident need to become more representative of both its membership and of the medical profession at large.

Although this process of redefinition and change is not yet complete, some clear indi-

cations have emerged which make it possible to address with confidence the questions raised above.

As I stated earlier, it is not possible for the AMA to represent each individual physician. But it is possible—and desirable—for the AMA to represent each physician as a member of the medical profession as a whole.

This can be accomplished through what C. A. Hoffman, M.D., president of the AMA, termed in his inaugural address a "representative consensus" of the profession. To achieve this requires contributions from the broadest possible spectrum of the profession: from individuals, groups and organizations.

### SPECIALTY GROUPS

Because it is aware of this, the AMA has taken steps and established procedures to broaden the franchise. By action of the House of Delegates, house staff physicians now elect a voting member to the House and the same right is about to be extended to medical students.

A total of 24 specialty groups now have special sections in the AMA and voting representation in the House of Delegates.

Both of these mechanisms provide opportunity for a physician to be represented within the context of his own special interest within the profession.

Through the original basic structure of the AMA, the state and local societies, a member has available to him a second mechanism for representation on a geographical basis.

Some physicians feel that neither of these mechanisms work in a manner deemed to insure true representation. Whatever the validity of this criticism, it needs only to be observed that it is subject to change. California, for one has moved to provide for direct election of delegates to the AMA House of Delegates, rather than their election by the California House of Delegates. Other states are considering similar action.

Such decisions are up to physicians to determine through the local and state societies. The AMA imposes neither the conditions of representation nor of membership.

The point is this: As a true federation, much of the effective power of the AMA is at the local level. It is there to be used by the physician who is willing to pay the price of becoming involved. After that, it depends on his



powers of persuasion and leadership as to how effective he will be.

Although its structure should insure true representation of its members' interests, the AMA within the past year has opened two direct lines of communication to its members at the local level. One was a membership opinion poll, sent to every member of the AMA. The second is the series of hearings being conducted by the Committee on Long Range Planning and Development.

Recommendations based on these hearings will be made to the House of Delegates at the Annual Convention in New York next June. The opinion poll drew response from over 50 percent of the membership and clearly established one basic fact: the AMA does indeed act in accordance with the general will of its membership and therefore does reflect the prevailing attitudes within the profession on various issues.

Yet if this is so, why then the general unease that prevades the profession which so often expresses itself in discontent with the AMA? Why the turn toward unionism and other forms of representation that only serve to undercut the efforts of the AMA and fragment the profession?

### THIRD-PARTY PAYERS

The answer, I think, lies in that phenomenon known as "future shock."

Both our nation and our profession are undergoing a period of growth and change that, while similar to other such periods in history in some respects, is unique in certain other respects. In this case, new knowledge and new technology are being created at a rate undreamed of only 20 years ago. When these are linked to an instant communication system, the impact on both the individual and the society are coupled and redoubled.

"Future shock" for the practicing physician is compounded by the specter of some new form of government intervention into medical and health care—an intervention that would profoundly change the personal and professional life of every physician in the nation. The very vagueness of the nature of the intervention only serves to enhance the insecurity and doubt that such a threat inspires. And the experience of the medical profession with government programs and third-party payers has hardly been

such as to inspire confidence.

Here we come, I believe, to the heart of the problem—the essential reason for disenchantment with the AMA on the part of some segments of the practicing profession. And again, this feeling derives in some part from a misunderstanding of the AMA, its structure and its policies.

What is the relationship of the AMA to the third-party payers and to the government?

Third-party payers operate essentially through local and regional programs. The AMA, as a federation, considers that the proper and logical approach is to permit its local and state societies to work out their own relationships with the local plans, supplying such support and information as is necessary. And on the national level, the AMA has representation on the board of Blue Shield through which it seeks to resolve any problems that can only be approached on that level.

Yet, it is only realistic to recognize that third-party payers are separate entities with interests and goals of their own which will not always coincide with those of the physician. The relationship, from our point of view, will probably never be perfect, but it can be improved and at least some of the frustration eliminated.

### NO COMPULSION

And the AMA can—and will—insure that third-party payers will not dictate the method or manner of medical practice.

We need to be equally realistic in our attitudes toward the government. We must recognize that we have passed the day when the private sector can answer all needs and resolve all problems. It simply does not have the resources.

But the private sector does have the talent and the knowledge—given the financial resources. And this fact forms the basis of the AMA's position toward government.

The AMA believes that, where necessary, the government should provide the resources to initiate or support programs or facilities but that operations should be left to the private sector. Further, there should be no element of compulsion in any government program nor should the government seek to dictate the practice of medicine or the terms of medical education.



In an increasingly large and complex society, government may be expected to seek a correspondingly larger role. This is inevitable. Also inevitable, however, is the basic acquisitive nature of government—any government.

And this is one of the very reasons why a strong, vigilant AMA is more necessary today than ever before. As government grows larger (and it will do so no matter what we wish), it is imperative in the interest of the freedom and vitality of the society, that there exist strong institutions outside of government to check its power, restrain its acquisitiveness and monitor its performance.

The individual citizen cannot do this. Small organizations cannot do it effectively. It requires a strong national organization with the strength that derives from a united membership to perform this task.

### ESTABLISHED INSTITUTIONS

The impact of “future shock” is undermining faith in the American Medical Association just at the time when its continued existence is most necessary. This, too, I think is inevitable in light of the questioning and doubt and disorientation that accompanies any period of change.

But it is necessary to examine the consequences of such a trend. Nearly every factor

in the present-day practice of medicine tends to accent the essentially disparate nature of our profession. New knowledge and technology, experimentation with new modes of practice—these and other factors emphasize specialization and division. Fragmentation in the method of representation will only accelerate these trends, not resolve them or the problems they create.

We need to recognize that in a time of change established institutions are at their most vulnerable yet, paradoxically, it is precisely at such times that they are most necessary.

For in a time of change and a time of questioning, established institutions offer a point of stability and a frame of reference. They serve as a base for rational transition, as the means for assimilating and effectuating new knowledge, as the guarantor of relevance, and, specifically in the case of medicine, as the focal point for unity in an increasingly specialized and disparate profession.

If the profession is to pass through this period in an orderly fashion and maintain its integrity (a quality composed of many parts), these responsibilities must be performed by some organization.

The only organization that we as a profession possess that can play this role is the AMA.

\* \* \*

### Ease into Exercise

For all of you whose New Year's resolutions include “more exercise,” a word of caution: Sudden vigorous physical activity, without any preceding warm-up exercise, may be hazardous to even a healthy heart.

In a UCLA School of Medicine study, 31 of 44 healthy firemen developed momentary abnormalities in their electrocardiograms (ECGs) after abruptly starting a strenuous running exercise. When they went through prior warm-up exercises, however, the abnormalities did not show up.

Dr. R. James Barnard, speaking at a recent American Heart Association meeting, said that neither the state of physical conditioning nor age had anything to do with determining which men had abnormal ECGs. The men ranged in age from 20 to 50.

ECGs record the electrical signals that cause the heart to beat. The disturbances that appeared indicated the heart was not getting

enough oxygen to meet the demands of the physical activity, because of inadequate blood flow through the heart's arteries. The findings may account for some heart attacks suffered by people with normal coronary arteries.

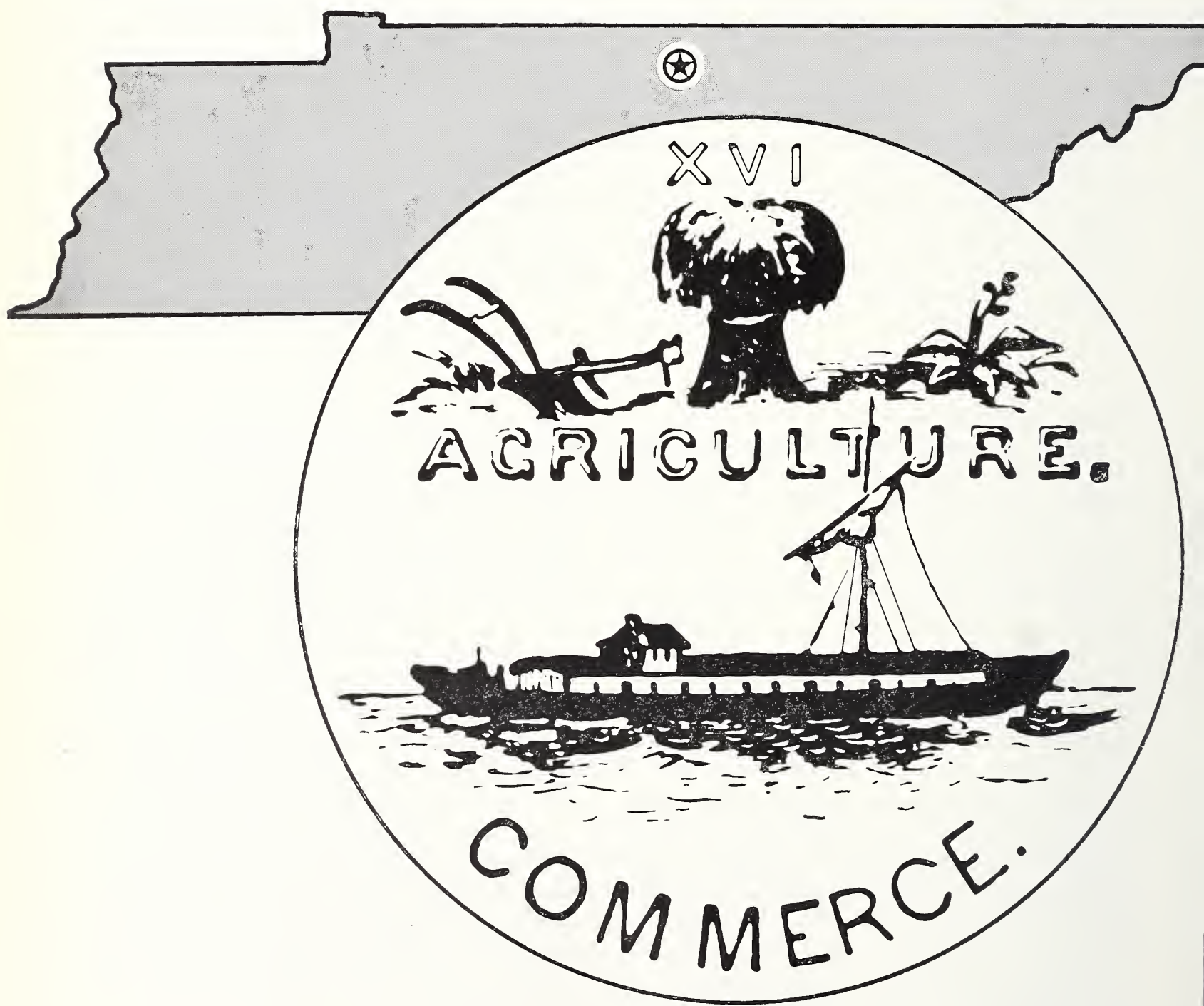
Ordinarily, heart attacks occur in people who have a condition called coronary atherosclerosis, which means the arteries have hardened and gotten plugged up with fatty deposits. Such obstruction, however, is not always found. This indicates that in certain persons, sudden physical activity might cause a blood shortage, even if only momentary, resulting in a heart attack.

The firemen, among other tests, had to suddenly jump on a treadmill—set for a 30% grade and moving at 9 miles per hour—and run for 10 or 15 seconds. The warm-up which averted abnormalities consisted of easy jogging in place for at least 2 minutes, or walking on the treadmill, with a gradual increase in its angle, for 6 to 8 minutes.

Reprinted from *Virginia Medical Monthly* Mar. 1973.



# Because you practice medicine in the Volunteer State...





If he's making the  
rounds of San Francisco...

# Antivert<sup>®</sup> (meclizine HCl) for vertigo\*

Antivert<sup>®</sup> (meclizine HCl) has been found useful in the management of vertigo associated with diseases affecting the vestibular system. It is available as Antivert (12.5 mg. meclizine HCl) and Antivert/25 (25 mg. meclizine HCl) scored tablets for convenience and flexibility of dosage. Antivert/25 (25 mg. meclizine HCl) Chewable Tablets are available for the management of nausea, vomiting, and dizziness associated with motion sickness.

\*INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

*Effective:* Management of nausea and vomiting and dizziness associated with motion sickness.

*Possibly Effective:* Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

**CONTRAINDICATIONS.** Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

**WARNINGS.** Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

*Usage in Children:* Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

*Usage in Pregnancy:* See "Contraindications."

**ADVERSE REACTIONS.** Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

**ROERIG** 

A division of Pfizer Pharmaceuticals  
New York, New York 10017





### **NBC's Distorted Broadcast "What Price Health?"**

On last December 19, the National Broadcast System aired nationwide a so-called documentary entitled "What Price Health?" The obviously distorted and biased program stirred up a hornet's nest, not only in the medical profession, but in public sentiment and among members of the Congress.

In a unique letter to Julian Goodman, President of NBC, Dr. William R. Schultz, OSMA President, protested the "misrepresentation, emotionalism and downright inaccuracy" of the broadcast. The uniqueness of the letter lies in the tactic of applying to the broadcast system the same restrictions that the network advocates applying to the medical profession.

Ohio, it might be said, has more than its share of interest in the broadcast. The sponsoring Eaton Corporation is based in Cleveland, Ohio, and one of the distorted case histories used in the broadcast had a Cleveland child as its subject.

In addition to Dr. Schultz's letter to the network, he also addressed a letter to the chairman of the board of the Eaton Corporation, registering a similar protest. Luther W. High, M.D., Millersburg, chairman of the OSMA Committee on Public Relations, also addressed a letter of complaint to Eaton Corporation.

Copies of Dr. Schultz's letter to NBC were sent to all Ohio Congressmen, Ohio's two U.S. Senators and to the Chairman of the Federal Communications Commission.

A powerful ally of medicine in this issue is Ohio Congressman Samuel L. Devine, who is the top ranking Republican member of the House Interstate and Foreign Commerce Commission. Congressman Devine is introducing legislation to regulate radio and TV networks. He is also asking the Federal Communications Commission for a full investigation of NBC broadcast "What Price Health?"

Many other medical organizations are registering protest.

In a communication dated January 10, 1973, Dr. Ernest B. Howard, Executive Vice-President of the American Medical Association, addressed

a communication to Mr. Julian Goodman, President of the National Broadcasting Company, protesting the lack of objectivity in the December 19 broadcast "What Price Health?" This letter and a formal complaint was sent by the AMA to the Federal Communications Commission. Copies also were well distributed among medical organizations and TV station managers across the nation.

Following is the text of the letter written by Dr. Schultz:

January 26, 1973

Mr. Julian Goodman, President  
National Broadcasting Company  
30 Rockefeller Plaza  
New York, New York 10020

Dear Mr. Goodman:

The Ohio State Medical Association would appreciate NBC's support of the Broadcast Security Act, which will be proposed as federal legislation to assure broadcast accuracy, quality, scope and public participation by setting up a federal program administered by the Federal Communications Commission.

Under this program, a Federal Radio and Television Institute would be established to fix standards, guidelines and regulations to govern all programs of the broadcasting industry.

Radio and television in most other nations enjoy the benefit of government control and/or government ownership in order that government policies and programs be accurately presented to the people. For their own good, the people are enabled to see newcasts and documentaries that are fashioned, directed and aired under direct government control. It is the purpose of our legislation to bring the benefits of all this government largesse to the poor, backward citizens of the United States.

Of course, this national institute will be made up of a majority of consumers. In order for the broadcast industry to be fully represented, each network will submit to the Chairman of the FCC the names of six vice presidents, from which he would select one for appointment to the Commission.

Since the costs of television and radio advertising have increased in recent years at a rate in excess of the cost-of-living index, there will be levied a tax on all radio and television networks, all radio and television stations and all radio and television receivers.

There will be no advertising. Funds from



the tax would be apportioned to the various network and stations on a quarterly basis, with the amount determined by an efficiency rating system promulgated by the Institute.

All officers and employees, all newscasters, entertainers, commentators, writers, producers and directors, etc., will be placed on salary scales fixed by the Institute.

All of this would be carried out on a non-profit basis.

To paraphrase Senator Edward M. Kennedy, we in the United States have progressed far beyond the point where obtaining radio and television broadcast services, information and entertainment can be left as a matter of survival of the fittest. Caveat emptor, a wise admonition in dealing with the practices of many radio and television interests, can no longer be tolerated as an operating principle in obtaining protection from the broadcast industry. Such a principle is not in the national interest.

This proposed Broadcast Security Act would protect the American people from inaccuracy, misrepresentation, poor performance, callousness and excess profits in the broadcast industry by establishing a government-controlled, efficiently functioning broadcast system that would benefit all the people while controlling excessive and highly escalating costs.

What I have done so far, Mr. Goodman, is apply the same misrepresentation, emotionalism and downright inaccuracy to the broadcast industry as your network applied to my profession December 19, 1972.

I am referring to the NBC special entitled "What Price Health?"

This was a deliberate, planned distortion and misrepresentation of the medical and health care picture in the United States today. It was a tremendous disservice to my profession, to the health care industry, to the voluntary and private insurance industry, to existing government medical care programs and, above all, to the people.

For example, consider the gross misrepresentation of the Kurstin Knapp case in Cleveland as presented by NBC. This was depicted as being a cold, cruel, and inhuman treatment of a little girl whose life is not as important as money.

The true facts, Mr. Goodman, the true facts are that this little girl's problem was recognized immediately after her birth, her case was re-

ferred to an excellent pediatrician and a specialist in cardiovascular diseases was involved.

The child was too young for the very serious surgery she required, so she was watched very carefully until she was old enough for an operation.

Further, although her father had been laid off at his place of employment, he was recalled to work with his medical and hospital insurance in full effect at the time of surgery on the child last November 8 by a widely recognized thoracic surgeon.

Even if there had been no private insurance, this child would have qualified for full assistance under the Ohio Crippled Children Program. Also, she would have qualified under the Aid to Dependent Children of the Unemployed. This child, regardless of her father's employment or unemployment, received the finest medical attention.

We produced all this accurate information regarding Kurstin Knapp in a matter of a few hours. A college journalism freshman could have done the same thing. Instead of producing accuracy, "What Price Health?" produced a travesty. And this is not the first time NBC health care "specials" have grossly and deliberately misrepresented the American health care picture.

Well-informed radio audiences and television viewers are concerned today with threats, some real and some implied, of a federal radio-TV takeover. I am one of these because I feel free expression is so essential to both the individual and the collective liberties of all Americans.

However, when the public is confronted with such inaccuracies, misrepresentations and diatribes as "What Price Health?" et al, one cannot help but see an erosion of public support of your industry's right of self-determination. Why? The right of self-determination carries with it a moral and social responsibility that requires honesty and accuracy. *If the broadcast industry destroys the confidence of its audiences—the people—then the destruction of your independence is only a matter of time.*

And, speaking of destruction of independence, let us consider the legislation so highly touted as the great panacea for all health problems. Why does NBC, by airing such distortions as "What Price Health?" want to impose upon the American people the Kennedy plan—a national health care dictatorship?



That plan permits only a single source of payment—the federal government—for all providers of health care services and facilities. Does NBC equally advocate that all the radio and television be similarly controlled by the federal government?

Why does NBC advocate for the medical profession federal controls when federal controls are totally repugnant to the broadcast industry?

Why does NBC advocate legislation that would completely destroy one of the nation's major industries—the voluntary and private health insurance industry? If these policies are so terrible, why does the broadcast industry accept dollars to air health insurance advertisements?

Why does NBC advocate destroying the nation's pharmaceutical industry? The Kennedy plan would do that.

Why does NBC advocate destroying the private, independent practice of medicine, particularly solo practitioners, partnerships and small group practices? The Kennedy plan would accomplish that.

Why does NBC advocate a totalitarian health care program that could cost the American family triple its present annual health care expenses? The Kennedy plan would do that.

Why does NBC so consistently support the Kennedy plan that proposes to take an additional \$38.5 billions from general revenues that already suffer an annual deficit of more than \$25 billions? The Kennedy plan would do that.

Why does NBC not investigate why the estimated cost of the Kennedy plan are four to six times greater than costs of other legislative proposals?

The United Nations Demographic Yearbook warns emphatically: "Lack of international comparability between area statistics arises primarily from differences in definition." Why does NBC wrongfully continue to cite false com-

parisons of United States health statistics with other nations in face of this strict international warning?

NBC most certainly would fight socialization of its industry. Why, then, does NBC so strongly advocate the Kennedy Plan, which is socialized medicine? "Socialized Medicine (is) any of various systems to provide the entire population with complete medical care through government subsidization of medical and health services, general regulation of those services, etc." (Random House Dictionary of the English Language, 1966 unabridged).

Why doesn't NBC interview for a "special" Dr. Robert Myers, who is one of the world's foremost authorities on social insurance and who resigned as Chief Actuary of the Social Security Administration rather than permit himself to be muzzled by advocates of Kennedy-type legislation?

I recommend Mr. Goodman, that you read carefully Dr. Myers' book, *Medicare*, published by the McCahan Foundation, and *The Case for American Medicine: A Realistic Look at Our Health Care System*, by Harry Schwartz of *The New York Times*, David McKay Co., publisher. Also, please read *Hazardous to Your Health* by Marvin Edwards, Arlington House, publisher.

I have studied thoroughly the American Medical Association's letter addressed to you January 10, 1973. I endorse and support that letter whole-heartedly.

To repeat for emphasis, if the broadcast industry destroys the confidence of its audiences—the people—then the destruction of your independence is only a matter of time.

Sincerely,  
William R. Schultz, M.D., President  
Ohio State Medical Association

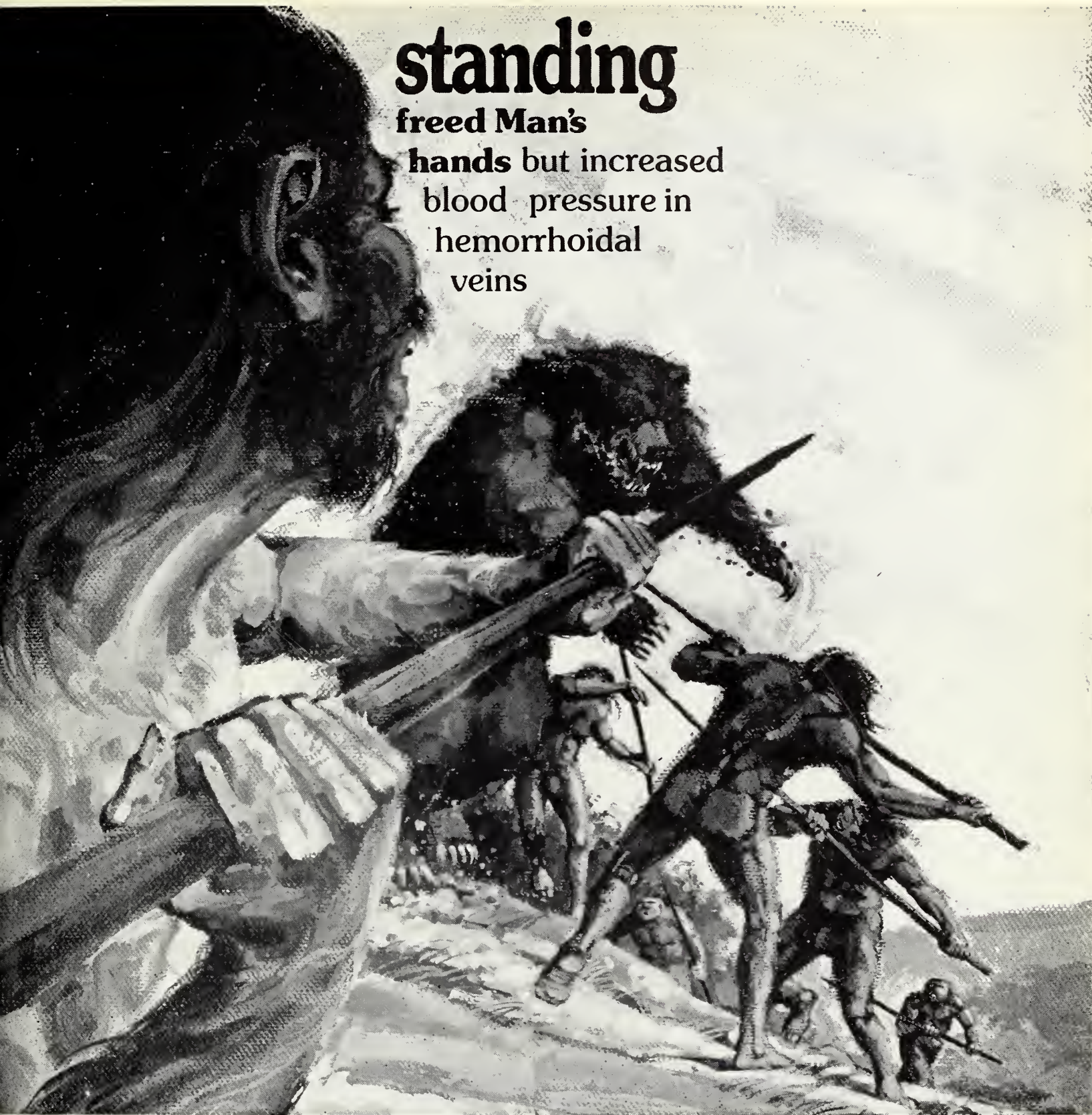
Reprinted from *The Ohio State Medical Journal*, March, 1973

\* \* \*

*Do not think too much of the dignity of your profession,  
Or of what it is beneath you to do.  
It is a moral disorder of young nurses and,  
I may add, of young doctors.*

—SILAS WEIR MITCHELL, M.D.





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blood pressure in  
hemorrhoidal  
veins

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# journal

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ASSOCIATION

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### INSTRUCTIONS TO CONTRIBUTORS

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, John B. Thomison, M.D., P.O. Box 70, Nashville, Tennessee 37202.

Manuscripts must be typewritten on one side of letterweight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer. The pages should be numbered and clipped or stapled together, but they should not be placed in a binder.

Bibliographic references should not exceed twenty in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, FG: What is Known About it, J. Tennessee M. A., 35:132, 1950.

Illustrations should be numbered and identified with the author's name. The editor will determine the number, if any, of illustrations to be used with the Journal assuming the cost of engravings and cuts up to \$25. Engraving cost for illustrations in excess of \$25 will be billed to the author. They will not be returned unless specifically requested.

If reprints are wanted, the desired number should be indicated in the letter accompanying the manuscript. No reprints are provided free and a reprint cost schedule will be forwarded upon request.



## *Abstract of the Proceedings of the House of Delegates Of the Tennessee Medical Association Memphis, Tennessee — April 11-14, 1973*

The House of Delegates of the Tennessee Medical Association met in Memphis, Tennessee with headquarters at the Sheraton-Peabody Hotel, April 11-14, 1973 in conjunction with the 138th Annual Meeting of the Association, with Dr. Robert H. Haralson, Jr., Speaker of the House and Dr. William H. Edwards, Vice Speaker, presiding.

The invocation was rendered by Dr. I. Lee Arnold, Chattanooga:

DR. I. LEE ARNOLD: "Let us pray. Our Father, we ask Thy blessings on the activities of this meeting. We pray that all that is said and done be for the betterment of our fellow man. We are thankful for the dedicated leaders of our medical profession who give freely of their time and energy and pray that they may be granted wisdom in performing their duties. These things we ask in Thy name. Amen."

### REPORT OF THE COMMITTEE ON CREDENTIALS

Dr. Eugene W. Gadberry, Chairman of the Committee on Credentials, reported that ninety-seven registered duly elected members of the House of Delegates were present and represents a quorum. The Speaker declared the House was in session.

### 1972 MINUTES APPROVED

The Speaker announced that the Minutes of the last regular session of the House of Delegates were reproduced in the June, 1972 issue of the JOURNAL of TMA. It was moved and seconded that the Minutes of the 1972 regular session of the House of Delegates be approved as published in the June, 1972 issue of the JOURNAL. **The motion was adopted.**

### REFERENCE COMMITTEES

The Speaker announced the personnel of Reference Committees to consider reports, resolutions, amendments, and all matters requiring action by the House of Delegates.

#### REFERENCE COMMITTEE ON CREDENTIALS

Eugene W. Gadberry, M.D., Chairman,  
Memphis  
Robert G. Hewgley, M.D., Athens  
J. T. Jackson, M.D., Dickson

#### REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

John H. Burkhart, M.D., Chairman, Knoxville  
I. Armistead Nelson, M.D., Nashville  
S. Lane Bicknell, M.D., Jackson

#### REFERENCE COMMITTEE A

Walter H. Benedict, M.D., Chairman, Knoxville  
Joseph L. Willoughby, M.D., Franklin  
Hamel B. Eason, M.D., Memphis

#### REFERENCE COMMITTEE B

H. T. Vandergriff, M.D., Chairman, Maryville  
Robert M. Roy, M.D., Nashville  
J. H. Ragsdale, M.D., Union City

#### REFERENCE COMMITTEE C

Frank C. Womack, Jr., M.D., Chairman,  
Nashville  
Charles H. Alper, M.D., Chattanooga  
J. Malcolm Aste, M.D., Memphis

#### REFERENCE COMMITTEE D

Durwood L. Kirk, M.D., Chairman,  
Chattanooga



George R. Mayfield, Jr., M.D., Columbia  
Tinnin Martin, Jr., M.D., Memphis

#### REFERENCE COMMITTEE ON OUTSTANDING PHYSICIAN OF THE YEAR AWARD

Francis H. Cole, M.D., Chairman, Memphis  
Tom E. Nesbitt, M.D., Nashville  
John H. Saffold, M.D., Knoxville

#### NOMINATING COMMITTEE

As required in the By-Laws, the Board of Trustees in its January meeting, appointed a Nominating Committee with representatives from each of the three grand divisions of the state. The Speaker announced the personnel of the Committee.

##### EAST TENNESSEE:

Gilbert A. Rannick, M.D., Johnson City  
David P. McCallie, M.D., Chattanooga  
John H. Burkhart, M.D., Knoxville

##### MIDDLE TENNESSEE

Robert L. Chalfant, M.D., Nashville  
Clarence R. Sanders, M.D., Gallatin  
Carl E. Adams, M.D., Murfreesboro

##### WEST TENNESSEE

C. D. Hawkes, M.D., Memphis  
Oscar M. McCallum, M.D., Henderson  
Arden J. Butler, Jr., M.D., Ripley

<h4>ELECTION OF OFFICERS AND COUNCILORS APRIL 14, 1973</h4>
---

The report of the Nominating Committee was presented in the second session of the House of Delegates on Saturday, April 14. Nominees submitted by the Committee were voted upon individually and in each instance, the Speaker called for additional nominations from the floor. Those elected were:

*President-Elect*—E. Kent Carter, M.D., Kingsport

*Speaker—House of Delegates*—Robert H. Haralson, Jr., M.D., Maryville

*Vice Speaker—House of Delegates*—William H. Edwards, M.D., Nashville

*Vice President (East Tennessee)*—Charles L. Roach, M.D., Sevierville

*Vice President (Middle Tennessee)*—George R. Mayfield, Jr., M.D., Columbia

*Vice President (West Tennessee)*—A. Barnett Scott, M.D., Jackson

*AMA Delegate (Middle Tennessee)*—Tom E. Nesbitt, M.D., Nashville (January, 1974-December, 1975)

*AMA Delegate (West Tennessee)*—A. Roy Tyrer, Jr., M.D., Memphis (January, 1974-December, 1975)

*AMA Delegate (State-At-Large)*—Julian K. Welch, Jr., M.D., Brownsville (January, 1974-December, 1974) (Filling unexpired term of Tom E. Nesbitt, M.D.)

*AMA Alternate Delegate (West Tennessee)*—Hamel B. Eason, M.D., Memphis (January, 1974-December, 1975)

*AMA Alternate Delegate (State-At-Large)*—Julian C. Lentz, M.D., Maryville (January, 1974-December, 1974) (Filling unexpired term of Hamel B. Eason, M.D.)

#### TRUSTEES:

##### *Middle Tennessee:*

Charles B. Thorne, M.D., Nashville (1976)

##### *East Tennessee:*

Nat E. Hyder, Jr., M.D., Erwin (1975) (Dr. Hyder is filling the unexpired term of Dr. Carter.)

#### COUNCILORS:

Second District—John O. Kennedy, M.D., Knoxville (1975)

Fourth District—David Gordon Petty, M.D., Carthage (1975)

Sixth District—Clarence C. Woodcock, Jr., M.D., Nashville (1975)

Eighth District—James H. Donnell, M.D., Alamo (1975)

Tenth District—John B. Dorian, M.D., Memphis (1975)

*Nominees for Public Health Council:* (Three from Middle Tennessee, one of which will be subsequently appointed by the Governor.)

Kirkland W. Todd, Jr., M.D., Nashville

Lloyd T. Brown, M.D., Gallatin

Taylor Farrar, M.D., Shelbyville

*Nominees for Advisory Board for Tuberculosis Control:* (Three from East Tennessee, one of which will subsequently be appointed by the Governor.)

Charles L. Roach, M.D., Sevierville

William P. Bailey, Jr., M.D., Johnson City

Edwin Wayne Gilley, M.D., Chattanooga

THE ABOVE NOMINEES WERE ELECTED  
BY THE HOUSE OF DELEGATES.



## AMENDMENTS TO CONSTITUTION AND BY-LAWS

The Speaker called for action on any amendments to the Constitution lying on the Table from the last regular session of the House of Delegates. *There were none.* The Speaker also called for any amendments to the By-Laws lying on the Table from the last regular session of the House of Delegates. *There were none.*

### AMENDMENTS TO THE CONSTITUTION INTRODUCED AMENDMENT TO THE CONSTITUTION NO. CA 1-73

This amendment was introduced to amend Article IV, Section 6 of the Constitution of the Tennessee Medical Association to add the word

"Member" and further amend Article IV to add a new Section 8.

As amended, Constitution Amendment No. 1-73 would read as follows:

**Section 6.** An Intern or Resident Member is any doctor of medicine appointed and serving in an approved Intern or Resident status, serving in an approved hospital in Tennessee, and who is certified as an Intern or Resident Member of his component medical society.

**Section 8.** Wherever the term physician is used in this Constitution or in the By-Laws, the following definition shall apply: A physician is a person, who having been regularly admitted to a medical school duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in

## TENNESSEE'S OUTSTANDING PHYSICIAN OF THE YEAR

*Each year county medical societies in Tennessee are given the opportunity to present candidates for one of the Tennessee Medical Association's highest honors—the Outstanding Physician of the Year. The candidates may represent any specialty and may be selected for service to the community, a civic project, scientific and medical achievement, or any other activity which a county medical society determines the candidate to be outstanding.*

*For the sixteenth year the House of Delegates of TMA elected from three worthy candidates a truly outstanding physician for this high honor.*

**Harold B. Boyd, M.D.,** Memphis, was born on December 2, 1904, the son of a Seventh Day Adventist missionary teacher. During his childhood, he moved with his family to Georgia and Alabama, and finally to the Panama Canal Zone where his father founded a missionary school. At the age of eighteen, he graduated from the Emanuel Missionary College Academy in Michigan as president of his class.

He later received the M.D. degree from Loma Linda Medical School in California, interned at the Los Angeles County Hospital, and served a surgical residency in Bakersfield, California.

In 1932, he began an active orthopedic practice as a staff member of the Campbell Clinic in Memphis and immediately assumed a major role in teaching medical students and residents. In 1959, he was named professor and head of the Orthopedic Department at the University of Tennessee College of Medicine, and in 1962 was appointed chief of staff at Campbell Clinic.

His numerous published articles and presenta-

tions at local, national and international meetings have brought him worldwide recognition as an outstanding orthopedic surgeon. Among his major and original scientific contributions are dual bone grafts for nonunion and congenital pseudoarthrosis of bone, surgical exposure of the proximal ulna and radius, and surgical procedure for anatomic disarticulation of the hip.

Of equal significance have been his contributions to professional organizations. He has served as president of the Memphis and Shelby County Medical Society, Baptist Hospital medical staff, Tennessee State Chapter of the American College of Surgeons, Orthopedic Research and Education Foundation, president and secretary of the American Academy of Orthopedic Surgeons, vice-president of the American Board of Orthopedic Surgeons, trustee of the Journal of Bone and Joint Surgery, and a member of the surgical study section, National Institute of Health. Further, he is an active member of the Tennessee, and American Medical Associations.

A former orthopedic consultant for the U.S. Army in Japan and Korea, he has received numerous honors from foreign governments and medical societies.

He is married to the former Jean Frances Stewart, a housewife and fellow physician, and is the father of three children. He is also known by his colleagues in Memphis as a dedicated churchman and able Bible scholar.

In nominating Dr. Boyd for this Award, his county medical society praised him for his many activities in his medical society and services to his community.



The Distinguished Service Award is presented annually by the Board of Trustees of the Tennessee Medical Association to physician members who have made eminent contributions to the public welfare or to the advancement of medical science. When the Chairman of the Board of Trustees began the presentation of the award at the 138th Annual Meeting of TMA during the banquet on April 13, he announced there were three recipients of the award in 1973. The following are those who received the award.

**Bland W. Cannon, M.D.**, is a distinguished physician, skillful surgeon, and he has attained renown in the practice of neurosurgery.

Born in Brownsville, Tennessee, he attended Southwestern in Memphis, Northwestern University Medical College in Chicago, and received his graduate training at Mayo Clinic. He holds a B.S. and M.S. in neurology, a B.M., M.D., and M.S. in neurosurgery. He has been active in private practice in Memphis since 1951.

Dr. Cannon has served organized medicine in a number of ways. He was president of Memphis and Shelby County Medical Society in 1961, president of TMA in 1963, and he was a Tennessee delegate to AMA from 1964 through 1972. He has been president of two national neurosurgical organizations, and he has been active in other regional and national societies.

Possibly his major concern in the past ten years has been with the improvement of medical care services to all people, and his approach to this goal has been steadfast and energetic. He is a valued member of AMA's Council on Medical Education, concentrating on medical college standards, curriculum changes, and student participation in medical affairs, to enhance the quality of medical college graduates. He is the founder of comprehensive health planning in Tennessee, and the Mid-South Medical Center Council which he spearheaded was an active, influential organization before the Federal legislation established CHP as the major agency for community oriented health planning. The MMCC was able to assume the official role and to exert continuing influence on health planning for Memphis and adjacent regions, and it is considered a model for other such agencies nationwide. He has also been involved in RMP and has consistently, but frequently unsuccessfully, attempted to save the concept of a physician-dominated program from becoming suffocated in bureaucratic boondoggling.

Recently, in the time when UT Medical Units had an hiatus in leadership, a great deal of stability was provided by the wise counsel and

the broad perspective of nationwide experience and contacts. This counsel is presently continued in his association with the University as a special advisor for professional relations.

Possibly the greatest achievement of the honoree is his lovely wife whom he brought home from Minnesota. A charming person, a gracious hostess, and the mother of five sons, she has frequently been home alone when her husband was devoting himself to the study of Medicine.

The Association is proud to give Dr. Cannon this Award.

\* \* \*

**Henry S. Christian, M.D.**, Knoxville born at Three Notch, Alabama on September 1912. He received the A.B. degree from University of Alabama in 1932, and the M.D. degree from Johns Hopkins Medical School in 1937. Dr. Christian completed an internship in pediatrics at Harriet Lane Home of Hopkins Hospital in 1938, and a pediatric residency at Babies Hospital of Columbia University in 1940.

This distinguished colleague has served the Knoxville area in the private practice of pediatrics since 1940, with the exception of World War II when he was a general medical officer with the U.S. Army. He has served as professor of pediatrics and chairman of the Department of Pediatrics of the University of Tennessee Memorial Research Center and Hospital since its opening some sixteen years ago.

For the past several years, Dr. Christian has almost single-handedly attacked the neonatal death rate in East Tennessee with amazing results. He has established one of the best Neonatal Intensive Care Units in the country, organized transportation facilities for sick neonates, and directed special training sessions for nurses, ambulance drivers, helicopter and airplane pilots in the proper care of the sick neonate in transit. He has worked diligently to secure the best chance of survival for all newborns, regardless of place of birth. As a result of his accomplishments, the neonatal mortality figures for the Knoxville area are now lower than the figures reported in the European journals and are the lowest in the world.

The recipient is an active deacon and Sunday School teacher of Arlington Baptist Church in Knoxville. He is married to the former Mae Hall of Midway, Alabama and has a father of two children: a son in Madison, Wisconsin who also is a physician, and a married daughter in Charleston, South Carolina.



r. Christian is a member of the Knoxville Academy of Medicine, the Tennessee Medical Association and the American Medical Association, and uniquely qualified to receive the distinguished Service Award.

\* \* \*

**William A. Garrott, M.D.**, Cleveland, was another outstanding medical leader in Tennessee selected to receive this Award.

Born in Pembroke, Kentucky on April 2, 1900, Dr. Garrott received the A.B. degree from Vanderbilt University in 1921, and the M.D. degree from the Vanderbilt School of Medicine in 1926. He was elected President of the medical school student body in his senior year. He completed postgraduate training at St. Thomas Hospital in Nashville, the Polyclinic in Memphis, Tulane and Charity Hospital in New Orleans, and George Washington University Hospital in Washington, D.C. He served his country in both World Wars.

Dr. Garrott was a noted ophthalmologist in Cleveland for the past forty years. This physician registered 57,000 new patients since 1940, and 1700 new patients in the last year of his life. In the late 1940's he pioneered the drive for the establishment of the Bradley County Memorial Hospital. Since its opening in 1952, he continued to serve the hospital as chief of staff and as president-elect of the staff until his death.

The recipient ably represented his fellow physicians as president of the Bradley County Medical Society for three terms, vice-president of the Tennessee Medical Association and delegate to the TMA House for thirty-five years, president of the Tennessee Academy of Ophthalmology and Otolaryngology, associate councilor for Tennessee in the Southern Medical Association, and was a fellow and regent for Tennessee in the International College of Surgeons (Ophthalmology).

Active in community affairs, Dr. Garrott served two terms as chairman of the local Red Cross chapter, president of the Cleveland Kiwanis Club, trustee of the Elks Club, commander of Tennessee Post #81 of the American Legion, local post-surgeon of the Veterans of Foreign Wars, and he was a steward and trustee of Broad Street United Methodist Church. He is survived by his wife, the former Ruth L. Valtrip, and one son of Chattanooga.

The Board of Trustees presented the Distinguished Service Award for 1973 post-humously to William A. Garrott, M.D., of Cleveland. His wife, Mrs. Garrott, accepted the Award in behalf of our late distinguished colleague.

medicine, and has acquired the requisite qualifications to be legally licensed to practice medicine.

The Reference Committee recommended that Amendment No. CA 1-73 to the Constitution be adopted.

**ACTION: THE HOUSE OF DELEGATES APPROVED THE RECOMMENDATION AS AMENDED BY THE HOUSE, AND CONSTITUTION AMENDMENT NO. CA 1-73 WAS RECOMMENDED FOR ADOPTION. AMENDMENT NO. CA 1-73 WILL LIE ON THE TABLE UNTIL THE FIRST SESSION OF THE 1974 HOUSE OF DELEGATES.**

#### AMENDMENT TO THE CONSTITUTION NO. CA 2-73

This amendment would amend Article VIII, Section 2 of the Constitution of the Tennessee Medical Association by changing the period to a comma in the first sentence of the last paragraph, and inserting the words "except that this provision shall not apply to a Trustee who by virtue of election or appointment has served no more than two years of another's unexpired term," and amend Section 7 designating the exact time when elected officers assume their office.

As amended, Constitution Amendment No. 2-73 is as follows:

**Section 2.** The Board of Trustees shall consist of the President of the Association, the Speaker of the House of Delegates, the immediate Past-President, the President-Elect, and members elected by the House of Delegates as hereinafter provided.

Nine members of the Board of Trustees shall be elected by the House of Delegates, three from each grand division of the State, and no more than two from any one component society.

The elected Trustees shall serve for a period of three years and no Trustee shall be eligible immediately to succeed himself, **except that this provision shall not apply to a Trustee who by virtue of election or appointment has served any portion of another's unexpired term.** The Board of Trustees will organize by the election of a Chairman, and a Secretary-Treasurer from the nine elected as Trustees.

**Section 7.** All officers of the Association shall be elected at the second regular session of the House of Delegates, and they shall assume office **at the conclusion of this session.**



The Reference Committee recommended adoption of Amendment No. CA 2-73 as amended which affects that part of a Trustee filling an unexpired term of a Trustee elected as an officer.

**ACTION: THIS AMENDMENT WAS ADOPTED AS PRESENTED ABOVE. THE AMENDMENT LIES ON THE TABLE UNTIL THE FIRST SESSION OF THE HOUSE OF DELEGATES IN 1974.**

#### AMENDMENT TO THE CONSTITUTION NO. CA 3-73

This amendment amends Article VIII, Section 2 of the Constitution of the Tennessee Medical Association by adding the words "the Vice Speaker of the House of Delegates." With the proposed amendment, Article VIII, Section 2, will read as follows:

**Section 2.** The Board of Trustees shall consist of the President of the Association, the Speaker of the House of Delegates, **the Vice Speaker of the House of Delegates**, the immediate Past-President, the President-Elect, and members elected by the House of Delegates as hereinafter provided.

Nine members of the Board of Trustees shall be elected by the House of Delegates, three from each grand division of the State, and no more than two from any one component society.

The elected Trustees shall serve for a period of three years and no Trustee shall be eligible immediately to succeed himself. The Board of Trustees will organize by the election of a Chairman, and a Secretary-Treasurer from the nine elected as Trustees.

**The Reference Committee discussed the amendment which would increase the Board of Trustees by one member, making the Vice Speaker an active member of the Board of Trustees. The Reference Committee recommended adoption of this amendment.**

**ACTION: THE HOUSE ADOPTED CONSTITUTION AMENDMENT NO. CA 3-73 AS AMENDED. THE RESOLUTION LIES ON THE TABLE FOR FINAL ACTION UNTIL THE FIRST SESSION OF THE HOUSE IN 1974.**

#### AMENDMENTS TO THE BY-LAWS INTRODUCED

##### AMENDMENT TO THE BY-LAWS NO. BA 1-73

This amendment to the By-Laws would amend Chapter IV, Section 2 of the By-Laws of the Tennessee Medical Association as follows:

**Section 2.** Each component Society shall be entitled to send to the House of Delegates each year one delegate for every fifty active, **veteran, and intern and resident members**, and one for every fraction thereof, based upon the number of such members in the component Society in good standing as of December 1 of the year preceding the session of the House. Each component Society holding a charter from the Association, which has made its annual report and paid its assessment as provided in the Constitution and By-Laws, shall be entitled to at least one delegate. No delegate from any chartered component medical society shall be entitled to be seated in the House of Delegates unless the component medical society which he represents has complied with the requirements of the Association by submitting the report to the Councilor of the District in which the component society is located. Each delegate of a component society shall be a proxy representing all of the members of his component society, except as to matters upon which a referendum is held as provided in Article XI of the Constitution, and the meeting of the House of Delegates shall constitute the annual meeting of the members of the Association in accordance with the requirements of the law of the State of Tennessee relating to general welfare corporations.

This amendment describes what members from the county societies are entitled to send Delegates to the House of Delegates each year. This amendment would give intern and resident members an opportunity to be active members of county societies and their number would count in the makeup of the county society delegation to the House.

**The Reference Committee recommended adoption of the amendment.**

**ACTION: THE HOUSE OF DELEGATES ADOPTED BY-LAW AMENDMENT NO. BA 1-73.**



AMENDMENT TO THE BY-LAWS  
NO. BA 2-73

This amendment would change Chapter VIII, Section 10 of the By-Laws of the Tennessee Medical Association by changing the word "nine" in the first sentence to "eight."

This amendment had to do with congressional district representation stating that the Legislative Committee shall consist of one member from each of the congressional districts of the state. This change is necessary since the state lost one place in the House of Representatives in 1972.

The Reference Committee recommended that the amendment include only changing the word "nine" to "eight."

The House of Delegates amended the amendment further to state that the Committee on Legislation shall consist of one member from each congressional district of the state. By this action, it would make it unnecessary for an amendment to be made when the congressional district makeup of the state is changed. The amendment reads as follows:

**Section 10.** The Committee on Legislation shall consist of **one member** from each congressional district of the state. The Board will appoint the Chairman of the Committee. The Editor will be ex-officio, a member of the Committee. The Committee shall be organized with three members to be named for three years, three for two years and three for one year. Thereafter, members of the Committee shall be named for a term of three years each. In the work of the Committee, if it is found that additional members are necessary in the conduct of the Committee's business, the Committee may request the Board of Trustees for additional appointments to serve one year terms. Under the direction of the House of Delegates, it shall represent the Association in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, state, and national affairs. Its work shall be done with the dignity becoming a great profession, and with that wisdom which shall make effective its power and influence. It shall have authority to be heard before the entire Association upon questions of great

concern at such times as may be arranged during the Annual Meeting.

**ACTION: THE HOUSE OF DELEGATES APPROVED THE RECOMMENDATION AND ADOPTED BY-LAW AMENDMENT NO. BA 2-73, AS SHOWN ABOVE.**

AMENDMENT TO THE BY-LAWS  
NO. BA 3-73

This amendment would amend Chapter XII, Section 3 of the By-Laws of the Tennessee Medical Association by deleting the words "but as such, Societies are the only portals of this Association, and to the American Medical Association," from the first sentence, and adding the word "licensed and" to the second sentence.

As amended, By-Law Amendment No. BA 3-73 would read as follows:

**Section 3.** Each component Society shall judge the qualifications of its own members. Every reputable and legally **licensed and** registered physician, who is practicing or who will agree to practice nonsectarian medicine, shall be entitled to membership. Each component Society of this Association may amend its constitution and/or by-laws to provide that the payment of dues to the American Medical Association shall be a condition of active membership in that society. Before a charter is issued to any component Society, full and ample notice and opportunity shall be given to every such physician in the County to become a member.

The Reference Committee explained that this amendment was to clarify the amendment pertaining to the word "registered."

**ACTION: THE HOUSE OF DELEGATES AGREED WITH USING BOTH THE WORD "LICENSED" AND "REGISTERED" IN DETERMINING THE QUALIFICATIONS OF MEMBERS OF COMPONENT SOCIETIES. BY-LAW AMENDMENT NO. BA 3-73 WAS ADOPTED AS AMENDED.**

AMENDMENT TO THE BY-LAWS  
NO. BA 4-73

This proposed amendment provides in the By-Laws of the Tennessee Medical Association what has already been proposed in Constitution Amendment No. 3-73, to make the Vice Speaker of the House of Delegates a member of the Board of Trustees. This action would amend Chapter VI, Section 4 of the By-Laws by adding the words "and the Vice Speaker."



**Section 4.** The Speaker of the House of Delegates shall preside over that body and perform the usual duties of such officer. He shall sign the Minutes of its transactions when same have been read and approved by the House. In the event of his absence for any cause, or upon request of the Speaker, the Vice Speaker of the House of Delegates, shall perform those duties. The Speaker and the Vice Speaker shall also be ex-officio members of the Board of Trustees.

Since this amendment cannot be acted upon until the Constitutional amendment is considered, and since it will be subject to the passage or failure of the proposed Constitutional amendment, the Reference Committee recommends that this proposed By-Law amendment be held in abeyance and considered after disposition of the amendment to the Constitution has been acted upon at the next annual session in 1974.

**ACTION: BY-LAW AMENDMENT NO. BA 4-73 WAS ACCEPTED BY THE HOUSE OF DELEGATES AND WILL LIE ON THE TABLE UNTIL THE ANNUAL SESSION OF THE HOUSE IN 1974.**

#### **AMENDMENT TO THE BY-LAWS NO. BA 5-73**

This amendment amends Chapter IV, Section 3 of the By-Laws of the Tennessee Medical Association by changing the word "registered" to "eligible." As amended, the By-Law would read as follows:

**Section 3.** A majority of the eligible Delegates shall constitute a quorum, and all the sessions of the House of Delegates shall be open to Members of the Association.

The Reference Committee recommended that By-Law Amendment No. 5-73 be adopted.

**ACTION: THE HOUSE OF DELEGATES ADOPTED THE AMENDMENT TO THE BY-LAWS NO. BA 5-73.**

#### **RESOLUTIONS**

The Reference Committees have the option of recommending a resolution for adoption or rejection, for adoption as amended or substituted for referral, or for no action. The resolutions that follow are as amended, and in the form in which the House of Delegates adopted, referred or rejected them.

#### **RESOLUTION NO. 1-73**

**Health Manpower in Rural Areas**

**By: RURAL HEALTH COMMITTEE**

**TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, Trends in the United States toward urbanization and specialization in medical practice have resulted in a concentration of physicians in larger cities causing a maldistribution of physicians in certain rural areas and leaving some of the more sparsely populated rural areas without immediate access to medical care; and

WHEREAS, An increasing number of patients, greater demand for services, more difficult patient problems, more complex diagnostic and therapeutic procedures, and a greater need for continuing education are all placing increasing demands upon the physician's time and skill. Now, therefore be it

**RESOLVED**, That the Tennessee Medical Association urges local medical societies to give high priority to programs directed toward realigning the provisions of health care services in rural areas; and be it further

**RESOLVED**, That the Tennessee Medical Association initiate dialogue by the governing board of the Association with medical schools, the various specialty and generalist medical groups, and all other appropriate organizations to the end of establishing positive recruitment and motivation of physicians to provide medical care for rural people; and be it further

**RESOLVED**, That the Tennessee Medical Association encourage positive practical programs in the state to supplement those already being conducted to study new methods and innovations with respect to health care services for rural areas provided that any such program be approved by the local medical society; and be it further

**RESOLVED**, That the Tennessee Medical Association provide support for the recommendations of the AMA House of Delegates which call for the prompt start of major efforts "to encourage the development of new programs" to provide large numbers of family physicians.

**Reference Committee D—stated that the Tennessee Medical Association should encourage positive practical programs in the State to supplement those already being conducted and to study new methods and innovations with respect to health care services for rural areas, provided that any such program be approved by the local medical society.**

**ACTION: ADOPTED AS AMENDED**

#### **RESOLUTION NO. 2-73**

**Physician Utilization of Rural Home  
Health Resources**

**By: RURAL HEALTH COMMITTEE**

**TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, Organized medicine has long endorsed



the concept of home health care and current health needs require the most economical use of health manpower and facilities in rural and urban areas consistent with quality care; and

WHEREAS, State and local medical societies are properly concerned with the availability and adequacy of rural health care services which support the work of the physician. Now, therefore be it

*RESOLVED*, That the Tennessee Medical Association formulate and help to implement, through the county medical societies, a program to encourage physicians to utilize rural home health services with local control as they deem advisable in their communities.

**Reference Committee D—Recommended adoption of Resolution No. 2-73 as amended.**

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 3-73**  
**Comprehensive Health Planning in**  
**Rural Communities**

**By: RURAL HEALTH COMMITTEE**  
**TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, Scarcity of health resources and facilities in many rural communities leaves some sparsely populated rural areas without immediate access to health care services; and

WHEREAS, Physicians have long recognized the need for community health planning to prevent fragmentation of services, needless duplication of services, waste of money, and inefficient utilization of the total health team; and

WHEREAS, There is urgent need among small rural communities to plan and coordinate their resources with adjoining communities to comprise a population base large enough to support a full range of efficient and high quality health services and facilities. Now, therefore be it

*RESOLVED*, That the Tennessee Medical Association urge local medical societies and physicians to participate in local comprehensive health planning programs, particularly involving rural communities; and be it further

*RESOLVED*, That encouragement be given to have rural leadership represented on community, area, and state health planning councils to ensure sound planning for rural community health programs including health care delivery systems.

**Reference Committee D—stated that the Tennessee Medical Association should urge local medical societies and physicians to participate in local comprehensive health planning programs, particularly involving rural communities.**

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 4-73**  
**Actions of Aetna Life and Casualty**  
**Insurance Company**  
**By: BOARD OF TRUSTEES**  
**TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, American Medical Association Resolution No. 3 was introduced by TMA's Delegates in the AMA House of Delegates last June during the annual session in San Francisco; and

WHEREAS, A high-level conference was subsequently held by the AMA's Council on Medical Service with officials of the Aetna Life and Casualty Insurance Company for the purpose of seeking a mutual understanding, at which time Aetna agreed to cease from threatening physicians, agreeing to use local peer review mechanisms where such existed; and

WHEREAS, Tennessee physicians have continued to have numerous problems with Aetna Life and Casualty Insurance Company involving arbitrary decisions in paying claims for medical services; and

WHEREAS, Aetna has knowingly and willingly interfered with contractual agreements between patients and physicians. Now, therefore be it

*RESOLVED*, That the Tennessee Medical Association instruct its Delegates to the American Medical Association to convey to the AMA House of Delegates by resolution, the nature of the continuing problems that Tennessee physicians are experiencing with Aetna and other identified third party carriers.

**Reference Committee C—recommended that the Tennessee Medical Association instruct its delegates to the American Medical Association to convey to the AMA House of Delegates by resolution, the nature of the continuing problems physicians in this state are experiencing with Aetna and other identified third party carriers.**

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 5-73**  
**Statement of Understanding**  
**By: BOARD OF TRUSTEES**  
**TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, A growing number of third party providers for physicians' services are attempting to intervene between physicians and their patients for the professional services rendered by the physician and payments reimbursed to him; and

WHEREAS, Some third party providers even encourage patients to pay physicians only the amount arbitrarily determined by the third party provider. Now therefore be it

*RESOLVED*, That a "Statement of Understanding" be submitted for approval by the House of Delegates for the optional use by any physician who desires to use the Statement in an agreement with his patient for his professional services and charges, provided the physician and his patient both agree to the signing of



such a Statement of Understanding; and be it further  
*RESOLVED*, That the following Statement of Understanding is recommended for the optional use of Tennessee physicians to consider and use where desired when the physician and patient agree.

#### STATEMENT OF UNDERSTANDING

I agree that the determination of professional services to be rendered by my doctor and the fees to compensate him for these services are matters concerning my doctor and me. I understand that I have the primary duty and obligation to pay my doctor for his services, notwithstanding any contract I may have with any third party (be it an insurance company, employer, union, government, or the like). Neither my doctor nor I, will permit any third party to determine what medical services I need or what fees the doctor should receive in return for these services. Any agreement that either of us may have with any third party shall not affect our doctor-patient relationship and the decisions relating to medical care and fees. Neither my doctor nor I, as his patient, are in any way bound by any contract the other may have with any third party.

_____, 197	_____
Date	Patient
_____	_____
Witness	Physician

**Reference Committee C—recommended that the resolution be adopted.**

**ACTION: ADOPTED**

#### RESOLUTION NO. 6-73

##### Utilization and Peer Review Policy

By: BOARD OF TRUSTEES

TENNESSEE MEDICAL ASSOCIATION

*RESOLVED*, That in contracts where benefits include physicians' fees, the Tennessee Medical Association make it unequivocally clear that management, labor and third party carriers shall consult with duly constituted representatives of local medical societies before determining "usual, customary and reasonable" fees, and be it further

*RESOLVED*, That wherever county peer review mechanisms exist, it is essential that third parties make use of them as a primary method of resolving differences prior to threats of litigation; and, in turn, that peer review mechanisms be utilized when disputes exist between patients, physicians and third parties referable to the quality of medical care rendered, professional fees or the medical necessity for hospitalization; and correspondingly that the medical profession in Tennessee continue to actively support the development of peer review mechanisms in local societies where they do not exist; and be it further

*RESOLVED*, That the medical profession in Tennessee will not condone or tolerate action on the part of any third party that would encourage or promulgate litigation in the settlement of any such dispute; and be it further

*RESOLVED*, That through the National Blue Cross and Blue Shield and the Health Insurance Council that insurance carriers be informed of this policy; and be it further

*RESOLVED*, That the Tennessee Medical Association remind physicians that they have the right to enter into prior agreement with patients regarding the fee for services to be rendered.

**Reference Committee C—recommended adoption of the resolution.**

**ACTION: ADOPTED**

#### RESOLUTION NO. 7-73

##### Corporate Practice and Separate Billing

By Hospital Based Physicians

By: JUDICIAL COUNCIL

TENNESSEE MEDICAL ASSOCIATION

WHEREAS, The Tennessee Medical Association's Judicial Council has diligently sought to uphold the laws of the State of Tennessee, and the Code of Ethics of the American Medical Association; and

WHEREAS, The Judicial Council of the Tennessee Medical Association has sponsored resolutions in this House that previously pertained to the corporate practice of medicine, these resolutions having been adopted as policy; and

WHEREAS, There are some hospital-based physician members of the Tennessee Medical Association who are not yet billing separately for their services; and

WHEREAS, The Judicial Council of the American Medical Association states that a physician should not dispose of his professional attainments or services to any hospital, non-professional service corporation or lay body by whatever name called or however organized under terms or conditions which permit the sale of the services of that physician by such agency for a fee; and

WHEREAS, It is ethical and legal for hospitals to serve as billing and collecting agents for physicians; and

WHEREAS, It is ethical and legal for hospitals to pay physicians a salary for administrative services (supervising or directing Departments of Radiology, Pathology, Anesthesiology, Cardiology and Emergency Rooms, etc.); and

WHEREAS, It is ethical and legal for the Medical staff of the hospital to form itself together into a professional association or corporation for the purpose of employing licensed physicians to render emergency services in the hospital (the physicians could be employees or agents of the staff rather than the hospital). Now, therefore be it

*RESOLVED*, That within the Code of Ethics and the recommendations contained in the Opinions and Reports of the Judicial Council of the American Medical Association, that members of the Tennessee Medical Association shall observe the Code of Ethics of the American Medical Association as they pertain to separate billing and laws of the State of Tennessee regarding the corporate practice of medicine.



**Reference Committee C**—recommended several amendments to the original resolution and the amendments are included in the above printed resolution. The Reference Committee stated that a physician should not dispose of his professional attainments or services to any hospital, non-professional corporation or lay body by whatever name called, or however organized under terms or conditions which permit the sale or the services of that physician by such agency for a fee.

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 8-73**

Physicians Employed to Staff Hospital  
Emergency Rooms

By: JUDICIAL COUNCIL

TENNESSEE MEDICAL ASSOCIATION

WHEREAS, Hospitals in Tennessee find it difficult in staffing their emergency rooms with qualified, licensed physicians; and

WHEREAS, It is illegal for an unlicensed physician to practice medicine in Tennessee, and under the Code of Ethics and existing policy of the Tennessee Medical Association, a physician should not dispose of his professional services to any hospital, corporation or lay board by whatever name called under terms or conditions which permit the sale of the services of that physician by such agency for a fee; and

WHEREAS, Contract practice is unethical if it permits features or conditions that are declared unethical in the Principles of Medical Ethics, or if the contract or any of its provisions causes deterioration of the quality of medical services rendered; and

WHEREAS, The Judicial Council of the Tennessee Medical Association recommends that previously formulated policies of the House of Delegates be amended, and that guidelines for hospital emergency room services by physicians be in keeping with the recommendations of the special study committee of representatives and attorneys from the Tennessee Medical Association. Tennessee Department of Public Health, and the Tennessee Hospital Association. Now, therefore be it

**RESOLVED**, That the following guidelines be adopted as policy of this Association as they pertain to staffing of emergency rooms by licensed physicians in hospitals of the State of Tennessee:

1. Licensed physicians staffing emergency rooms in hospitals must charge for their medical services and shall bill their patients for such services.
2. Physicians' services shall be billed separately from hospital services.
3. Hospitals may serve as billing or collecting agents for physicians.
4. Physicians may pay hospitals reasonable compensation for the hospital's services as a billing or collecting agent.
5. Hospitals may pay physicians' salaries for hospital administrative services, supervisory responsibilities,

educational activities and physical presence.

**Reference Committee C**—stated that the resolution should clearly state that hospitals may pay physicians' salaries for hospital administrative services, supervisory responsibilities, educational activities and physical presence.

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 9-73**

Development of Professional Standards  
Review Organizations (PSRO's)

By: BOARD OF TRUSTEES

TENNESSEE MEDICAL ASSOCIATION

WHEREAS, Public Law 92-603 calls for the designation of Professional Standards Review Organizations (PSRO's) by the Secretary of Health, Education and Welfare, and which will be responsible for assuring the quality, effective, efficient and economical delivery of health care services under the Social Security Act; and

WHEREAS, PSRO's are now a requirement of the Federal law and a fact of life affecting every physician; and

WHEREAS, The guidelines, mechanism and areas within the respective states are not yet known, but is being developed by HEW, and will involve every physician, necessitating cooperation by every county medical society, large and small to the degree that has never been needed before; and

WHEREAS, Every county medical society in Tennessee is urged to establish a council or committee that would keep local physicians informed, and knowledgeable toward the formation and the operation of a Peer Review Organization in the district where such counties may be included; and

WHEREAS, State or county medical societies cannot function directly as PSRO's, but may be instrumental in developing organizations which can function in a PSRO capacity under the provisions of the law; and

WHEREAS, The medical profession must exert responsible leadership in the development and operation of PSRO's to assure a proper role for physicians in the review procedures, and the continuing availability of quality health care services for the public. Now, therefore be it

**RESOLVED**, That every county medical society in Tennessee immediately establish a council or committee to receive informational materials and guidelines relating to the duties and functions of PSRO's; and be it further

**RESOLVED**, That an officer, committee chairman or member of such a committee be designated and made known to the Tennessee Medical Association to receive information to be forwarded by the Tennessee Medical Association so that physicians in every county medical society throughout the state may be kept informed and knowledgeable on PSRO organizations.



**Reference Committee C—recommended adoption of the resolution.**

**ACTION: ADOPTED**

**RESOLUTION NO. 10-73**

**Protection of Doctor-Patient Relationship**

**By: TENNESSEE ACADEMY OF  
FAMILY PHYSICIANS**

**EUGENE W. GADBERRY, M.D.**

WHEREAS, As private practicing physicians, we are all aware of the unwarranted intrusion of third parties into the contractual agreement between patient and physician; and

WHEREAS, It is our duty to protect the confidential relationship between doctor and patient; and

WHEREAS, The Congress of Delegates of the Tennessee Academy of Family Physicians, at its annual meeting November 1, 1972 went on record as supporting the protection of the doctor-patient relationship. Now, therefore be it

**RESOLVED**, That the Medical Record Committees or medical staffs of the individual hospitals in Tennessee be requested to assume responsibility of the protection of confidential records of patients; and be it further

**RESOLVED**, That all inquiries for medical information received by hospitals from insurers, third party carriers, or government agencies, will be accompanied by a properly executed and current authorization for release of information signed by the patient or his proper representative(s); and be it further

**RESOLVED**, That upon receipt of an inquiry, the Medical Record Department of the hospital, clinic, or other such facility, shall submit information on the face sheet of the patient's chart, this face sheet to include identification data, the admitting and final diagnosis, and the name of the operation(s) performed, and the verified pathological diagnosis if any; and be it further

**RESOLVED**, That if additional information is required by the insurer, the representative shall be referred to the attending physician inasmuch as requests for the entire medical record or photostatic copies of the history, physical and progress notes shall be considered unethical and unacceptable; and be it further

**RESOLVED**, That it is recognized that an insurer may request, under the contestability clause specified by law, specific antecedent information during a period of contestability; that this request to the physician shall identify the specific information requested from the history of the present illness; that upon requests for past history a list of such antecedent information as may be related and pertinent to the insurance policy in question will be provided by the insurer; that the physician may then review the medical record and may provide the pertinent information; and be it further

**RESOLVED**, That operative reports and copies of pathology tissue reports should not be considered as necessary inasmuch as the surgery is to be clearly

listed on the face sheet of the chart; is self-explanatory as to the procedure involved and the verified pathological diagnosis, if any; that reports of X-rays, EKG or other laboratory aids used by the physician in establishing the clinical diagnosis should not be necessary; and be it further

**RESOLVED**, That for the purposes of financial audits and government provider audit programs, it is specified by law that "the provider need only show the auditor that part of the records relating to the physician's authorization for services and not the notes made by nurses and physicians or diagnostic data which are confidential information; and be it further

**RESOLVED**, That the physician may honor requests for unusual information of a technical nature which the patient himself may not be able to provide; and be it further

**RESOLVED**, That certification and recertifications are to be filed separately from the body of the medical record and shall be made available to the carrier or government agency but that these should not be entered on the progress notes; and be it further

**RESOLVED**, That copies of this Resolution be sent to every hospital in Tennessee, requesting their cooperation and the implementation of this Resolution.

**Reference Committee C—recommended adoption of the resolution with several changes in wording and phrasing of the resolution. The above resolution includes the revisions presented and the House approved.**

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 11-73**

**Professional Standards Review Organizations  
(PSRO's)**

**By: BOARD OF TRUSTEES**

**TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, Guidelines for Professional Standards Review Organizations are not yet written, although considerable information is being disseminated from the Department of Health, Education and Welfare as well as other sources; and

WHEREAS, The Tennessee Medical Association is attempting to keep appropriate committees of county medical societies informed with the most viable and factual information that becomes available from official sources; and

WHEREAS, The Tennessee Foundation for Medical Care, Inc. was approved in 1972 by this House of Delegates to be the vehicle to guide PSRO activities, and the Foundation has been chartered by the TMA Board of Trustees, and it is available for guiding PSRO development when funds are provided by the Government. Now, therefore be it

**RESOLVED**, That:

1. The Tennessee Foundation for Medical Care, Inc. keep physicians informed through their county medical societies regarding PSRO's.

2. The Tennessee Foundation for Medical Care,



Inc. take the initiative in developing a state-coordinated, locally-operated plan for Professional Standards Review Organizations in Tennessee, and assist in establishing boundaries for area PSRO organizations.

3. The Tennessee Foundation for Medical Care, Inc. seek to obtain funds to staff and develop the procedures for guidance, and assist area designated PSRO's as to funding, procedure, employing staff, etc.

4. The Tennessee Foundation for Medical Care, Inc. take the necessary steps appropriate to comply with Federal law, to develop, if possible, pilot-type procedures in order to get the initial organization structure underway.

**Reference Committee C—recommended adoption of the resolution.**

**ACTION: ADOPTED**

**RESOLUTION NO. 12-73**

Advertising By Female Laboratory Testing, Inc.

By: **HAMBLÉN COUNTY MEDICAL SOCIETY**

**C. C. BLAKE, M.D.**

WHEREAS, The Female Laboratory Testing, Inc., of Fort Lee, New Jersey, has purchased advertising space in national publications including Sunday Magazine Newspaper Supplements offering for sale a product known as "Pap-Chek" intended for cervico-vaginal cytology screening to be collected by women in their homes without supervision of or examination by a physician; and

WHEREAS, Such advertisement refers to and reflects unfavorably upon the services of members of the medical profession; and

WHEREAS, It has been a time-honored and virtually universally-accepted principle of medical ethics that physicians ought not to advertise their services or guarantee their results; and

WHEREAS, Such advertisement purports to have the endorsement of the Department of Health, Education and Welfare for this procedure; and

WHEREAS, This advertised procedure encourages women to bypass physical examination by causing false assurance of freedom from cervical cancer by a "negative" report and by instillation of thoughts of pain, expense, and intimacy of examination in their minds; and

WHEREAS, Any procedure, being more expensive than the pathologists usual routine charge for cervico-vaginal cytologic examination in this state, adds unnecessarily to the total cost of medical care; and

WHEREAS, Any procedure which would encourage women not to receive periodic genital evaluation is most dangerous and contrary to the usual accepted medical care in this state. Now, therefore be it

**RESOLVED**, By the House of Delegates of the Tennessee Medical Association that this Association vigorously opposes the activities of the Female Laboratory Testing, Inc., in Tennessee to promote the use of "Pap-Chek"; and be it further

**RESOLVED**, That the Secretary of the Association shall relay the wishes of the Association to the following organizations:

1. The Medical Society of New Jersey, asking that the physician or physicians who have allowed their services to be advertised nationally be censured for patently unethical conduct;
2. The Licensing Board for the State of New Jersey, asking that the physician or physicians who have allowed their services to be advertised nationally be reviewed to determine if New Jersey medical licensure statutes have been violated in so advertising their services;
3. The Department of Health, Education and Welfare, asking that the Department review any endorsement it may have given to the use of this product and, if such has been given, to reconsider endorsement of a product that encourages women not to seek competent medical care; and
4. The Tennessee delegates to the House of Delegates of the American Medical Association introduce a resolution at the next regular session of the AMA House of Delegates, calling for the AMA to take similar action concerning such advertising by Female Laboratory Testing, Inc.

**Reference Committee B—recommended accepting and filing of the resolution.**

**ACTION: RESOLUTION NO. 12-73 WAS ACCEPTED FOR INFORMATION AND PLACED ON FILE**

**RESOLUTION NO. 13-73**

Malpractice Legislation

By: **MAURY COUNTY MEDICAL SOCIETY**

**GEORGE R. MAYFIELD, JR., M.D.**

WHEREAS, The members of the Maury County Medical Society have become concerned about the increasing threat of malpractice litigation in Tennessee; and

WHEREAS, Even the filing of a non-meritorious complaint against a physician, especially when publicized in local news media, can be a traumatic occurrence for the physician and members of his family; and

WHEREAS, Other states have obtained passage of favorable legislation designed to minimize the filing and prosecution of malpractice actions especially in cases of doubtful merit. Now, therefore be it

**RESOLVED**, That the House of Delegates of the Tennessee Medical Association formally request the Board of Trustees and the appropriate committees of the Tennessee Medical Association to continue to study the beneficial malpractice legislation enacted and proposed in other states; and be it further

**RESOLVED**, That the Board of Trustees report their progress to the House of Delegates at the 1974 meeting of the Tennessee Medical Association.

**Reference Committee A—referred the resolution to the Board of Trustees and recommended that the Board report their progress to the House of Delegates at the 1974 annual**



session. The Committee further noted that the Insurance Committee of TMA is currently studying the subject of this resolution.

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 14-73**

Reimbursement of Medical Fees By  
Third Parties

By: MAURY COUNTY MEDICAL SOCIETY  
GEORGE R. MAYFIELD, JR., M.D.

WHEREAS, Physicians in each of the medical specialties undergo comparable training within their chosen field of family or specialty practice regardless of whether they eventually locate in a metropolitan area or rural community; and

WHEREAS, There is a well-known maldistribution of physicians to the disadvantage of rural communities; and

WHEREAS, The diagnosis and treatment of a particular medical condition requires the same degree of skill, effort, and time whether it is carried out in the city or in the small town. Now, therefore be it

**RESOLVED**, That the House of Delegates of the Tennessee Medical Association go on record as opposed to any fee schedules or reimbursement practices of third party agencies which discriminate against patients of physicians living in small communities when compared with similar reimbursements in the metropolitan areas of Tennessee.

**Reference Committee C—recommended several amendments in the resolution included in the above amended resolution. The Reference Committee called for the Tennessee Medical Association to go on record as opposed to any fee schedules or reimbursement practices of third party agencies, which discriminate against patients of physicians living in small communities when compared with similar reimbursements in the metropolitan areas of the State.**

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 15-73**

Acupuncture

By: JUDICIAL COUNCIL  
TENNESSEE MEDICAL ASSOCIATION

WHEREAS, Great interest has developed in recent years in acupuncture; and

WHEREAS, The observations of several respected members of the medical profession of this country suggest that acupuncture may yet prove to have some scientific basis and eventually find a legitimate if limited use in American medicine; and

WHEREAS, No scientific demonstration of the efficacy, safety or mechanism of action of acupuncture is yet available; and

WHEREAS, Section 3 of the Principles of Medical Ethics states that, "A physician should practice a

method of healing *founded on a scientific basis*; and he should not voluntarily associate professionally with anyone who violates this principle."

**RESOLVED**, That until such time as a scientific basis for acupuncture has been developed, it be used only under controlled scientific studies or on an experimental basis with the knowledge and consent of the patient.

**Reference Committee B—stated that great interest has developed in recent years in acupuncture. Until such time as a scientific basis for acupuncture can be developed, it should be used only under controlled scientific studies or on an experimental basis with the knowledge and consent of the patient. The amendments to this end are included in the above resolution.**

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 16-73**

Phase III Fee and Wage Controls

By: MAURY COUNTY MEDICAL SOCIETY  
GEORGE R. MAYFIELD, JR., M.D.

WHEREAS, Physicians have supported the President's program of inflation controls by holding their fee increases below the severe 2.5% annual limitation on fee increases; and

WHEREAS, Such severe restrictions were never placed on other professions outside the health care field; and

WHEREAS, All mandatory controls have now been lifted from small businesses and other professional occupations; and

WHEREAS, Wages paid by physicians to their employees, being necessarily competitive with other segments of the economy, must increase annually by at least 5% and supplies and equipment purchased by physicians have increased in price by an estimated 8-15%; and

WHEREAS, Most physicians cannot continue to make up these differences between cost increases and allowable fee increases by adding to their workload. Now, therefore be it

**RESOLVED**, That the continued imposition of wage and fee controls upon physicians is unfair to the extent of being punitive and cannot long be tolerated; and be it further

**RESOLVED**, That the Tennessee Delegation to the American Medical Association House of Delegates express our dissatisfaction and concern in the most effective possible manner; and be it further

**RESOLVED**, That the Tennessee Medical Association and all physicians in Tennessee be urged to communicate our concern about discriminatory fee controls to the President of the United States and to our Senators and Representatives in Congress.

**Reference Committee C—recommended adoption of the resolution.**

**ACTION: ADOPTED AS AMENDED**



## RESOLUTION NO. 17-73

Privileges and Rights to Medical Students

By: JEAN M. HAWKES, M.D.

WHEREAS, The American Medical Association has in the last few years allowed medical students to participate on its councils and committees, and also to participate as full members of the House of Delegates; and

WHEREAS, The Tennessee Medical Association has demonstrated continued interest in the medical students and has invited the SAMA Presidents of each of the three medical schools in the state to its Annual Meeting each year; and

WHEREAS, Several other state medical associations have allowed students to participate as full members of the State House of Delegates, thereby interesting students in the medical association activities. Now, therefore be it

**RESOLVED**, That the Tennessee Medical Association appoint to the TMA House of Delegates each of the SAMA Presidents of the three medical schools in Tennessee, or an alternate designated by the SAMA President; and be it further

**RESOLVED**, That these three individuals have full rights, privileges, and responsibilities inherent in the position as a member of the House of Delegates; and be it further

**RESOLVED**, That the expenses incurred by these students in attending the council, committee, or Annual Meeting of the TMA be reimbursed by the Tennessee Medical Association.

**Reference Committee A—recommended defeat of the resolution. There was considerable discussion from the floor mostly in opposition to the recommendation of the Reference Committee. There was support for the resolution by those speaking on the floor of the House. It was stated that an opportunity presented itself for further education of young physicians. A motion was made to refer the resolution to the Committee on Constitution and By-Laws, with direction to report to the next annual session of the House.**

There was then question after the referral action to the Committee on Constitution and By-Laws. The Speaker stated that the purpose would be to find a mechanism to implement the resolution.

Upon further discussion, the motion to refer to the Committee on Constitution and By-Laws was changed with the reference to be made for referral to the Board of Trustees for study, and upon receiving the Board's recommendation, that the Committee on Constitution and By-Laws look into the necessary amendments.

**ACTION: RESOLUTION NO. 17-73 AS INTRODUCED WAS REFERRED TO THE**

**BOARD OF TRUSTEES WITHOUT DIRECTION, FOR CONSIDERATION AND THE BOARD WILL BRING RECOMMENDATIONS TO THE COMMITTEE ON CONSTITUTION AND BY-LAWS TO BE PRESENTED IN THE HOUSE OF DELEGATES IN 1974. THE MOTION TO REFER CARRIED AND THE REFERRAL MOTION WAS ADOPTED.**

**ACTION: RESOLUTION NO. 17-73 WAS REFERRED TO THE BOARD OF TRUSTEES.**

## RESOLUTION NO. 18-73

Problems Facing Qualified Foreign Medical Personnel in Obtaining Licensure in Tennessee

By: KNOXVILLE ACADEMY OF MEDICINE

WHEREAS, Tennessee law now states that foreign medical applicants must be in the United States two years immediately prior to taking Basic Science Boards; and

WHEREAS, This is irrational because the applicant may have had ten years in the United States during his training, returned to his homeland and then came back to the United States as an immigrant; and

WHEREAS, The previous time in the United States does not count and he must begin again satisfying residence requirements; and

WHEREAS, The annual Basic Science Examination is now scheduled to occur two weeks after the June examination given by the Licensing Board for the Healing Arts, which now uses the Federal Licensing Examination (FLEX); and

WHEREAS, Tennessee law now states that the applicant must have his Basic Science Certificate in hand before he can apply for the examination by the Healing Arts Board.

Thus, an immigrant applying in January, 1973, would have to take the Basic Science Examination in July, 1973, and then wait until December, 1973 before being allowed to take the FLEX examination; and

Thus, the foreign applicant must wait three full years before he can be licensed in Tennessee. This is too long and Tennessee is thus losing many well-qualified physicians to other states. With the present shortage of physicians, Tennessee cannot stand this loss. Now, therefore be it

**RESOLVED**, That the House of Delegates of the Tennessee Medical Association respectfully urge the Board of Trustees to sponsor enabling legislation to effect the prompt licensing of qualified foreign physicians.

**Reference Committee A—considered the resolution, and stated that members of the appropriate Boards have assured that consultations are ongoing to modify or rectify licensing procedures in the State of Tennessee. The Com-**



**mittee made an amendment to read that "The Association respectfully urge the Board of Trustees to sponsor enabling legislation to effect the prompt licensing of qualified foreign physicians."**

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 19-73**

**Physicians' Listings in the Classified or "Yellow" Pages of Telephone Directories**

**By: JUDICIAL COUNCIL  
TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, It is both unethical and unlawful for physicians to advertize; and

WHEREAS, The listing of physicians in the classified or "yellow" pages of the telephone directories is a public service and is not construed as advertizing; and

WHEREAS, Such listings, especially in more populous areas, may be of greater value to the public if they are grouped according to specialty or field of practice; and

WHEREAS, The public deserves some assurance of the accuracy of such listings. Now, therefore be it

**RESOLVED**, That such listings are ethical only to the extent that they serve the convenience and welfare of the public; and be it further

**RESOLVED**, That such listings must be approved or certified by the local medical society; and be it further

**RESOLVED**, That such listings must conform to the following rules set forth by the Judicial Council:

1. Physicians may list themselves in the classified or "yellow" pages of telephone directories only in the localities in which they reside and/or maintain offices.

2. These listings may be grouped according to specialty and/or sub-specialty in addition to or instead of alphabetically if approved by the local medical society.

3. Where the listing of physicians in this manner is so approved, a physician may be listed under only one specialty and/or sub-specialty in addition to his alphabetical listing. This must correspond to the specialty designation approved by the local medical society.

4. Such listings may contain only information that will help a person to select and locate a physician whose specialty or field of practice is appropriate to his need. This is limited to:

(a) Name and office and/or residence addresses. This may include the name of the office building, clinic or hospital, in which the office is located.

(b) Telephone numbers of these and of answering services or mobile phones if used.

(c) Office hours or equivalent statement (not over 2 lines).

(d) Specialty or field of practice as approved by the local medical society.

5. Such listings must be of uniform type and format within the directory. Bold-faced type, symbols, boxes or other devices that may give the appearance or effect of advertizement are unethical and may not be used.

6. The name of a clinic or other professional group or association may not be listed separately by name among the listings of physicians, but may be listed under the appropriate classification elsewhere in the directory.

**Reference Committee A—submitted three amendments to the resolution which are included above.**

**ACTION: ADOPTED AS AMENDED**

**RESOLUTION NO. 20-73**

**NBC's "What Price Health?"**

**By: MEMPHIS-SHELBY COUNTY  
MEDICAL SOCIETY  
JOHN B. DORIAN, M.D.**

WHEREAS, The National Broadcasting Company did present on December 19, 1972 a "news special" entitled "What Price Health?" purportedly to state some of the health problems that exist in this country and to discuss some of the major solutions offered; and

WHEREAS, Instead of an attempt at constructive criticism or objective journalism, extreme and highly emotional case histories were used to portray the health care system in the United States of America in the worst possible light, suggesting that the problems are of a scale so massive that only Federal intervention can solve them; and

WHEREAS, We feel that the National Broadcasting Company presented a highly biased and distorted view of medical care in this country with a complete disregard for honest reporting. Now, therefore be it

**RESOLVED**, That the Tennessee Medical Association lodge a complaint against this type of "reporting" and so notify all NBC outlets in Tennessee, Mr. Julius Goodman, President of the National Broadcasting Company, and the Federal Communications Commission; and be it further

**RESOLVED**, That the American Medical Association be informed of our support of the endeavors in opposing such reporting.

**Reference Committee D—made amendments deleting part of the original resolution, which was adopted as stated above. The Reference Committee recommended that the American Medical Association be informed of TMA's support of the endeavors in opposing such reporting. The Reference Committee also recommended prompt expediting of the action required in this resolution.**

**ACTION: ADOPTED AS AMENDED**



## RESOLUTION NO. 21-73

### Pap Smear Test

By: TENNESSEE DIVISION—AMERICAN  
CANCER SOCIETY  
CHARLES C. TRABUE, M.D.

WHEREAS, Approximately 200 women in Tennessee die needlessly every year from cancer of the uterine cervix; and

WHEREAS, The early detection of cancer of the uterine cervix can result in the institution of effective curative therapy in a high percentage of cases; and

WHEREAS, Screening for early cancer and pre-cancer by methods using exfoliative cytology studies have proven to be simple, effective and economical; and

WHEREAS, Only a minority of the adult female population in this state have been screened for cervical cancer; and

WHEREAS, a large percentage of the adult female population is regularly seen as patients in the private offices of practicing physicians of Tennessee. Now, therefore be it

**RESOLVED**, That the Tennessee Medical Association go on record as officially endorsing the widest use of screening for cervical cancer among the adult female population as a sound health practice; and be it further

**RESOLVED**, That such screening be recommended in all adult females at least annually; and be it further

**RESOLVED**, That private physicians be encouraged to instruct their patients of the wisdom of cervical cytology studies for early detection of uterine cancer, and that they urge patients to have such screening procedures done; and be it further

**RESOLVED**, That the medical staffs of public and private hospitals be encouraged to adopt as policy the routine assurance that screening of adult females for uterine cervical cancer be accomplished at least annually on both in-patients and out-patients whenever specific contraindications do not exist.

**Reference Committee B—amended the original resolution presented and with the corrections as shown above, the Reference Committee recommended adoption.**

**ACTION: ADOPTED AS AMENDED**

## RESOLUTION NO. 22-73

### Professional Standards Review Organizations (PSRO's)

By: THOMAS G. DORRITY, M.D.

WHEREAS, Public Law 92-603, Section 249(f), Title XI, Part B, requires the establishment of Professional Standards Review Organizations by the Secretary of the Department of Health, Education and Welfare throughout the Nation; and

WHEREAS, These PSRO's exist at the pleasure of the Secretary of HEW and will function as directed by him or will be abolished and replaced by him whenever he determines that they are incapable of performing their designated duties; and

WHEREAS, These PSRO's will be required to set and judge national norms of medical care, diagnosis and treatment, have authority to determine in advance any elective admission of any Federally subsidized patient to any health care facility or any admission of said patient for extended or costly courses of treatment, will review the professional activities of physicians and other providers of health care in hospitals and in their offices as to the necessity, quality and economy of such health care, will maintain and review profiles of care and services provided said patients and profiles on each health care practitioner and provider as regards quality and need for service rendered in institutions and in private offices, and will perform other duties under this law; and

WHEREAS, Physicians that are providers of health care who do not comply regularly in their treatment of Federally subsidized patients with the norms and standards determined by PSRO's and approved by the Secretary of HEW may have sanctions and fines up to \$5,000.00 levied against them and their unapproved activity or behavior publicized by the Secretary of HEW; and

WHEREAS, These PSRO's and, indeed, all physicians treating Federally subsidized patients, if they volunteer to assist in establishing said PSRO's will in effect become the agents of the Federal Government under virtual dictatorial control of the Secretary of HEW; and

WHEREAS, The establishment of PSRO's under this law, for the reasons noted above, directly interferes with the actual practice of medicine and is not in the best interests of our profession or of our patients. Now, therefore be it

**RESOLVED**, That the Tennessee Medical Association and the Tennessee Foundation for Medical Care, Inc., take no action to establish any Professional Standards Review Organization under Public Law 92-603.

**Reference Committee C—recommended rejection of this resolution.**

**ACTION: REJECTED**

## RESOLUTION NO. 23-73

### Hospital Medical Record

By: HOSPITAL COMMITTEE

TENNESSEE MEDICAL ASSOCIATION

WHEREAS, The hospital medical record contains medical information of a personal nature to the patient; and

WHEREAS, The patient often conveys this information to his doctor in a personal and confidential manner; and

WHEREAS, It is presently common place for third parties to request review of hospital records and photostatic copies of these records. Now, therefore be it

**RESOLVED**, That hospital medical records shall be available only to members of the hospital medical staff, unless written permission is otherwise granted by the patient and his physician; and be it further



*RESOLVED*, That a similar resolution be introduced by Tennessee Medical Association delegates to the American Medical Association.

**Reference Committee C—recommended adoption of the resolution.**

**ACTION: ADOPTED**

**RESOLUTION NO. 24-73**

**Nurse Practitioners**

**By: BOARD OF TRUSTEES**

**TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, The American Medical Association has adopted a policy which recognizes the need for the expansion of the role of the nurse in providing health care; and

WHEREAS, Professional nurses by their education and training, are equipped to assume greater health care responsibility under the supervision of physicians; and

WHEREAS, The postgraduate training of professional nurses today includes specific and specialized instruction in medical specialty areas with programs for the development of the pediatric nurse, cardiac care nurse, nurse practitioner, nurse clinician, nurse midwife, and other specialized training programs; and

WHEREAS, The use of the specially trained professional nurse can benefit those sectors of the population without adequate health care or immediate availability of service; and

WHEREAS, Training programs are being undertaken today within Tennessee and graduates of these programs are being utilized in our State at the present time to provide service in areas that might otherwise be deprived; and

WHEREAS, The Tennessee Medical Association and the Tennessee Nurses Association coordinated in 1968 and developed a joint statement on patient care which included closed chest cardiopulmonary resuscitation, venipuncture and acute cardiac care which were subsequently adopted by this House of Delegates. Now, therefore be it

*RESOLVED*, That the Tennessee Medical Association recognizes the need for expanding the role of the professional nurse in providing health care, and be it further

*RESOLVED*, That the House of Delegates instructs the Tennessee Medical Association Interprofessional Liaison Committee to work with the Tennessee Nurses Association in an effort to update definitions of authority and responsibility of the physician-nurse relationship and develop additional joint statements on patient care and to submit any statements so developed to this House of Delegates for acceptance as policy as soon as practicable.

**Reference Committee B—recommended adoption of this resolution.**

**ACTION: ADOPTED**

**RESOLUTION NO. 25-73**

**Abortion Law Revisions**

**By: BOARD OF TRUSTEES**

**TENNESSEE MEDICAL ASSOCIATION**

WHEREAS, On January 22, 1973 the United States Supreme Court handed down two decisions which reviewed the constitutionality of abortion statutes in Texas and Georgia; and

WHEREAS, The Court held that abortion legislation interferes with a pregnant woman's right to privacy, a "fundamental constitutional right" encompassed in the Fourteenth Amendment to the Constitution; and

WHEREAS, The Court, in rendering its decisions thereby limited a State's power to enact new, restrictive laws on the subject of abortion; and

WHEREAS, As a result of the high Court's decision, the Federal District Court for the Middle District of Tennessee held the Tennessee Abortion Law unconstitutional; and

WHEREAS, Following this series of events, the Board of Trustees directed the President of the Tennessee Medical Association to appoint a special Ad Hoc Committee to study in detail, with the assistance of legal counsel, the Court's decision and to recommend a new law for Tennessee which would be in compliance with the Court's ruling; and

WHEREAS, Such a Committee, composed of eight physicians, was appointed and has, with the assistance and advice of legal counsel and ten additional consultants, including the Commissioners of Public and Mental Health and representatives of the Tennessee Hospital Association, considered every detail of the Court's decision; and

WHEREAS, The Committee reported back to the Board of Trustees its recommendations in the form of a suggested new law for the State of Tennessee. Now therefore be it

*RESOLVED*, That the attached legislative proposal developed by the Ad Hoc Committee, be adopted as the position of the Tennessee Medical Association regarding our State's need for a new Abortion law; and be it further

*RESOLVED*, That the Legislative Committee of the Tennessee Medical Association be instructed to immediately seek introduction and adoption of the attached legislation by the 88th Tennessee General Assembly.

AN ACT to provide that only physicians licensed by the State to practice medicine or osteopathy may perform abortions within the state; that no abortion shall be performed subsequent to the first trimester of pregnancy except in a licensed hospital; that no abortion shall be performed during the stage subsequent to viability except when it is necessary in the judgment of a licensed physician for the preservation of the life or health of the woman, or the physician has reason to believe the child would be born with serious physical or mental defect; that no physician shall be required



to perform an abortion, no person shall be required to participate therein, and no hospital shall be required to permit abortions to be performed therein; that a physician performing an abortion shall keep a record thereof and shall make a report to the Commissioner of Public Health with respect thereto at such time and in such form as the Commissioner may reasonably prescribe; that such record and report shall be confidential in nature and shall be inaccessible to the public; and to repeal T.C.A. Sections 39-301 and 39-302.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE THAT:

*Section 1.* Only physicians licensed by the State to practice medicine or osteopathy may perform abortions within the State of Tennessee.

*Section 2.* No abortion shall be performed subsequent to the first trimester of pregnancy except in a hospital licensed by the State.

*Section 3.* No abortion shall be performed during the stage subsequent to viability except when it is necessary in the judgment of a licensed physician for the preservation of the life or health of the woman or when the physician has reason to believe that the child would be born with serious physical or mental defect.

*Section 4.* No physician shall be required to perform an abortion and no person shall be required to participate in the performance of an abortion. No hospital shall be required to permit abortions to be performed therein.

*Section 5.* A physician performing an abortion shall keep a record of each such operation and shall make a report to the Commissioner of Public Health with respect thereto at such time and in such form as the Commissioner may reasonably prescribe. Each such record and report shall be confidential in nature and shall be inaccessible to the public.

*Section 6.* Tennessee Code Annotated Sections 39-301 and 39-302 are hereby repealed.

*Section 7.* If any one or more provisions of this Act or the application thereof to any person or circumstance shall be held invalid, the remaining provisions hereof and the application hereof to other persons or circumstances shall not be affected thereby, and the invalid provision or provisions shall be deemed to be severable.

*Section 8.* This Act shall take effect from and after its passage, the public welfare requiring it.

**Reference Committee A—recommended adoption of the resolution.**

**ACTION: ADOPTED**

## RESOLUTION NO. 26-73

### Prescriptions

#### CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

THOMAS K. BALLARD, M.D.

WHEREAS, The Council on Drugs of the Ameri-

can Medical Association has strongly recommended that in the best interests of the patient, the prescription container, as a rule, should be labeled with the name and strength of the drug; and

WHEREAS, To implement this recommendation, the Council on Drugs of the American Medical Association suggests that the physician use two sets of prescription blanks, one which is for routine use and is imprinted with an order to label, or, he may write the word "label" on his personal prescription blank, if desired; and

WHEREAS, In emergency situations, such as accidental poisoning, over-dosage, or attempted suicide, immediate identification of a prescription drug from the label may be life-saving; and

WHEREAS, The information is invaluable when the patient changes physicians, moves to another locality, or contacts the prescribing physician at a time when his records are not readily available; and

WHEREAS, The information on the label would be of value in group practices, allergic individuals, and would help to prevent mix-up between two or more drugs being taken concurrently, or between medications being taken by different members of the family. Now, therefore be it

**RESOLVED,** By the House of Delegates that the Tennessee Medical Association should seek legislation making mandatory the labeling of all prescription products with the trade or generic name and strength of the drug, unless ordered otherwise by the prescribing physician.

**Reference Committee A—recommended adoption of the resolution.**

**ACTION: ADOPTED**

## REPORTS OF OFFICERS

### REPORT OF THE PRESIDENT

WILLIAM T. SATTERFIELD, SR., M.D.

The abstract of the President's Report states that:

"Although the President is the titular spokesman of the organization, the real and important work is done by the units of TMA. Untold man-hours go into the volume of business considered by Committees, Trustees, Officers and the Executive Staff. Perhaps every member should serve as President to appreciate the many and varied activities.

"No attempt is made herein to report officially, or in any completeness, the many activities of the segments of TMA. Reports of Officers, Trustees, the Executive Director, and the ever-efficient Committees, should be looked to for these items.

"No attempt is made to give a blow-by-blow description of my meetings attended, interviews, or rather voluminous correspondence. These are all part of the job.



"This report of the President of an organization as large and as representative as the Tennessee Medical Association encompasses a number of subjects:

1. Status of medicine in TMA and in America.
2. Activities during the year.
3. Credit for accomplishments where the credit is due.
4. Special problems of TMA.
5. Correlation of TMA with governmental affairs.
6. Correlation of TMA with AMA.
7. Future Planning.

"Regimentation of private physicians is being advanced at an alarming rate. There is legal regimentation by stringent Medicare regulations, Phase II and Phase III discrimination, and PSRO, the "claims cost" peer review. Other threats are present—re-licensure, control of malpractice liability, certificate of need, and promotion of HMO's.

"Physician organizations have objected, at first violently, but later in a quieter tone. There seems to be an acceptance of more and more control and more desire to cooperate to retain some small segments of control.

"Wide dissemination of objectional features of governmental health care in other countries seem to have very little impact on the American public. It is difficult to understand how politicians who are *least* respected in recent polls, are accepted by most of the public, and even by some physicians as the ones who should direct health care delivery, when physicians themselves were selected as the *most* respected in these polls. The *public's* attitude is more understandable when promises are made to lower the cost of medical care. For physicians, who know that the quality of medical care will probably suffer, this attitude is *not* understandable.

"Medicine's best defensive measure at present is education of the public. With few exceptions, physicians will in their lifetime pay more in taxes for *regulation of their own lives* than they will spend collectively on their abode, automobile, and the education of their children. We must know the legislators we elect and help seat those to whom we can communicate. This is what AMPAC and IMPACT are all about.

"There are discussions of priorities for TMA in this report which I hope you will read. Your

own ideas of carrying out these priorities will probably be more valuable than mine. The sum total of the thinking and efforts of all TMA members could accomplish much.

"It is difficult to believe that Congress will burden the American public with an unwise National Health Bill that will require Federal expenditures to be increased annually by a sum of \$80 billion, which is an increase of 30% in the annual operating cost of this country. This would break the fiscal back of a nation already 30% into bankruptcy by international monetary standards. With expensive back-door intrusions of the Federal Government into the health field enlightening Congress and the public, perhaps there will be hesitancy in violently modifying the entire health care system.

"I think you may want to read in more detail about these concerns of Medicine and you will find additional information in the report.

"We should be proud of TMA. Its many endeavors have continued the ever-increasing quality care of our patients.

"We should be proud of our Executive Staff, respected nationally as one of the most efficient. A perusal of the report of the Executive Director will point out the voluminous work done and the ever-responsible fiscal position of TMA.

"We should be proud of our members who accept assignments cheerfully and efficiently perform these assignments. I appreciate greatly the advice, cooperation, dedication and plain hard work of all members to whom I have assigned a task.

"The honor of being your President has inspired me and made me realize my responsibility. I thank you for that honor, the experience, and the real education the position has presented. My best efforts will continue in the service of this Association. Thank you."

*THE REFERENCE COMMITTEE—D, commended the President on an excellent report.*

*THE HOUSE accepted the report.*

## REPORT OF THE BOARD OF TRUSTEES

C. GORDON PEERMAN, JR., M.D., *Chairman*

The Chairman abstracted the Board report. The ongoing business of the TMA was described, which included legislative actions, the abortion law, communications, continuing medical education, finances, physician placement service, the doctor shortage, proposed develop-



ment of primary care centers, Professional Standards Review Organizations (PSRO's), policy decisions of many kinds, and a host of other business. The Board acted upon 141 items of business in the sessions conducted during the last twelve months. One session of the Board was a two-day meeting.

In addition, the Board made all appointments to Committees and/or Ad Hoc task forces; special appointments and representatives of TMA to various committees, boards, councils and conferences in the state, for national events as well. The Board implemented policy and instructions received from the House of Delegates, while exercising alertness for new trends and developments that have a bearing on the freedom and responsibilities of TMA members.

The Board meets each quarter and is assisted in its work by the TMA staff. The Board administers its work through the Executive Committee and eight Board committees which include Finance, Publications, Medical Licensure, Malpractice, AMA-ERF, and others.

Among the primary management responsibilities is the administration of policy of the TMA JOURNAL. The JOURNAL continues to serve as a medium for informing members about the concerns, activities and accomplishments of TMA. The Board maintains liaison with other organizations, especially with State Government, as well as hospitals, medical schools and national organizations.

The Board considers and recommends to the House of Delegates, after much study, major policy that should be determined. Seven resolutions were sponsored by the Board in the 1973 session of the House. The Board assesses the problems confronting the profession in the state, and the role of TMA with respect to these problems. It is the implementing body through the House of Delegates, committees and staff, on policies and programs approved by the House. The Board maintains soundness and control of financial affairs of the Association.

Among the highlights of some of the more important items of business acted upon in each meeting during the past year were, the Board:

- Studied the function of the Regional Medical Program Committee, expressing concern with the lack of liaison between the two RMP Programs in Tennessee, and with TMA.
- Directed that every effort be made to develop closer liaison with the Public Health Council through

the TMA Liaison Committee to the Public Health Department.

- Reviewed efforts to have TMA Interprofessional Liaison Committee meet jointly with an appropriate committee of the State Osteopathic Association to discuss the possibility of a joint examining board for physicians and osteopaths.
- Accepted the 1971 annual financial audit made by a CPA for TMA's fiscal affairs.
- Nominated Dr. Allen Bass, Nashville, for a vacancy on the State Basic Science Examiners Board.
- Submitted the names of physicians for consideration of appointment by the Governor to the Emergency Medical Service Advisory Council, Department of Public Health.
- Actions of the House of Delegates called for the Board to send a letter to all doctors and hospitals in the State on the definition of the legal aspects of physician's practice. It was recommended that the Commissioner of Public Health with the TMA President initiate such a letter.
- Approved the National Health Service Corps Program for those areas where approval was obtained from the local medical society, or the physician in or nearest to the community making a request for a NHSC physician, if no medical society existed.
- Authorized the Executive Director to employ an additional full-time staff person to assist in the legislative program.
- Directed TMA attorney to draw a charter for a Foundation for Medical Care.
- Approved a new type group insurance policy for the membership's benefit for life and health insurance.
- Reviewed the Business Tax Act then before the Tennessee General Assembly.
- Submitted a lengthy list of physicians for consideration of appointment on Councils and Committees of AMA Board of Trustees.
- Endorsed the Mediredit legislation as sponsored by AMA as a plan for financing health care.
- Approved of co-sponsoring a statewide accreditation workshop for Joint Committee on Accreditations' standards, in cooperation with the Tennessee Hospital Association.
- Discontinued policy of accepting tobacco advertising in the TMA JOURNAL.
- Approved TMA participating as one of the organizations under whose auspices there would be sponsored a symposium on diabetology, conducted in Memphis.
- Appointed an advisory committee consisting of TMA's three regional Vice Presidents to assist the Commissioner of Public Health in guiding the Health Department on the communities where National Health Service Corps physicians were being sought.
- Endorsed the statewide Emergency Medical Services Program.
- Submitted three physicians' names for consideration of appointment on the Board of Trustees of the Board of State Tuberculosis Control.



- Informed the director of Health Related Boards of the State Department of Public Health that TMA Trustees strongly opposed the licensing of any person represented by the American Association of Professional Hypnologists, declaring that hypnosis should be performed only by, and under the direction of a physician.
- Adopted a position opposing the Bennett Amendment (PSRO) and made TMA's position on this subject known to Tennessee's representatives in the Congress of the United States.
- Approved a program recommended by the staff to get pertinent information before house staff physicians serving in hospitals of the state, in an effort to sell these physicians on locating their practice in Tennessee when their training is completed.
- Considered the problem of unlicensed physicians practicing in Tennessee.
- Adopted the by-laws of the Tennessee Foundation for Medical Care, Inc.
- Submitted the names of three physicians, one to be appointed by the Governor for the State Public Health Council, and nominated physicians for appointment on the State Health Planning Council.
- Appointed the Board of Directors of IMPACT.
- Adopted a motion for officers and Board members to visit county medical societies upon invitation to discuss TMA activities and important issues affecting medicine in the state and nation.
- Studied proposed Certificate of Need legislation.
- Approved a statewide symposium to be presented by the Committee on Medicine and Religion.
- Received and discussed a recommendation submitted by the National Blue Cross Association on "no-fault" insurance.
- Approved the 1973 charter flight plans for a two-week tour in August to Scandinavia.
- Studied at length hospital emergency room services and physicians working in hospitals on contract basis.
- Approved the proposed guidelines for Hospital Emergency Room Physicians, adopted by a study committee in cooperation with the Health Department. The guidelines are:
  1. Licensed physicians staffing emergency rooms in hospitals must charge for their medical services and shall bill their patients for such services.
  2. Physicians' services shall be billed separately from hospital services.
  3. Hospitals may serve as billing or collecting agents for physicians.
  4. Physicians may pay hospitals reasonable compensation for the hospital's services as a billing or collecting agent.
  5. Hospitals may pay physicians' salaries for hospital administrative services.
- Declared acupuncture a medical procedure recommending that the Public Health Council take action for the Board of Healing Arts to utilize legal and statutory power to declare the practice of acupuncture as a medical procedure, and that it be included under the definition of the practice of medicine.
- Approved drafting legislation certifying emergency medical service personnel, permitting them to do certain procedures for which they are trained, provided they are under the supervision of a licensed physician. Also, the Board supported establishing seminars for physicians and EMT personnel throughout the State.
- Appointed the Nominating Committee for 1973 from the list of ex-officio and elected Delegates certified by the county medical societies.
- Nominated two physicians for new terms on the Board of the Tennessee Medical Association-Student Education Fund.
- Selected three physicians to receive TMA Distinguished Service Awards.
- Appointed those physicians to serve on standing and special committees of TMA in 1973-1974. Final approval of these appointments are to be made by the Board following the close of the annual session of the House of Delegates on April 14.
- Recommended that the Board favor Comprehensive Health Planning remain under the State Public Health Department, and further stated its preference that Certificate of Need authority be placed within the Health Department under the Hospital Licensing Board. The Trustees reaffirmed TMA's position as being in favor of Certificate of Need only where it pertains to in-patient hospital beds.
- Approved that the 1976 Annual Meeting be conducted in Nashville, if projected facilities are completed in time.
- Approved a *Physician's Assistant* bill as amended, and to be sponsored by TMA in the General Assembly.
- Appointed the TMA attorney, and the accountant for 1973.
- Approved a seven-day sponsored tour to Hawaii in March, 1973, as recommended by the Travel Committee.
- Adopted action for the Board: to sponsor a resolution in the House of Delegates concerning payment policies of Aetna Life and Casualty Insurance Company; to sponsor a resolution on utilization and peer review; to sponsor a resolution on a "Statement of Understanding"; and to sponsor a resolution on PSRO's calling for county medical societies to establish a committee that would deal with PSRO's in local areas.
- Requested the Committee on Constitution and By-Laws to present amendments for consideration of the House of Delegates to clarify "licensure," and to amend the Constitution and/or By-Laws to adequately define a "physician."
- Recommended that the Governor be urged to make inspection of food in restaurants an Administration bill, and that this inspection be under the supervision of the Public Health Department, rather than the Department of Conservation.
- Endorsed the Tennessee Division, American Cancer



- Society's uterine cancer task force goal.
- Received a report concerning medical unions.
- Allocated limited funds for travel expenses for TMA Board representatives to attend the AMA National Leadership Conference in Chicago.
- Studied and discussed at length the proposed Primary Health Care Centers in Tennessee. The Board took action that where a demonstrated need exists for a Primary Care Center, that the approval of the medical society within the area be obtained, and where no organized medical society exists, that approval of the nearest practicing physician or physicians be obtained for approval of a Primary Care Center, as a demonstration project.
- Designated a member of the Board to attend a Foundation for Medical Care Conference in Memphis, March 22-24.
- Approved the 1972 annual audit.
- Received a report from the TMA Student Education Fund on difficulty in collecting loans made to students that are now due.

*THE REFERENCE COMMITTEE D—commented on the summary of the scope of work and some of the actions that the Board of Trustees have been involved with during the past year. The Reference Committee was impressed with the tremendous amount of business handled by the Board of Trustees.*

*THE HOUSE accepted the report.*

REPORT OF THE  
SECRETARY-TREASURER  
JAMES W. HAYS, M.D.

The financial statement sets forth the fiscal condition of the Tennessee Medical Association as of December 31, 1972.

The customary examination of the Association's accounts was made by Ezra Jones, CPA, and the final audit was studied and approved by the Board of Trustees at its January meeting.

The Secretary-Treasurer reported that the Association uses the fund accounting method which accounts for assets, liabilities, income and expense by specific purposes. The carrying value of property has been reduced by recording depreciation on a straight line basis and recorded as an expenditure in the property fund. No provision has been made in the accounts for possible unrelated income tax that may be assessed by the Internal Revenue Service.

The operating fund is the active day-to-day accounting for the general expenditures of the Association's financial operations, organizational and administrative activities. All income from investments is used in the operating fund of the budget for ongoing expenses.

The 1973 budget was approved by the Board

of Trustees in its October quarterly meeting in 1972, after it was carefully studied and amended by the Finance Committee. The 1973 budget covering the fiscal year (which is the calendar year) is \$319,740.00.

A condensed financial statement taken from the operations report of the official audit, is included as a part of this report, so that the Association's fiscal affairs can be fully explained. Since the Tennessee Medical Association now is required by the Internal Revenue Service to allocate an amount of membership of dues to the JOURNAL, a separate breakdown of income and expense is included in this report.

The Board of Trustees and the Secretary-Treasurer welcome the opportunity to present this accounting of the financial affairs of the Tennessee Medical Association. The Trustees examine and approve income and expense statements of fiscal transactions at each quarterly Board meeting, a monthly summary of income and expenditures is reviewed by the Secretary-Treasurer.

TENNESSEE MEDICAL ASSOCIATION  
Nashville, Tennessee  
CONDENSED BALANCE SHEET  
December 31, 1972

	December 31	
	1972	1971
<b>ASSETS</b>		
1. Operating Fund—		
General Business	\$ 81,011.68	\$ 56,524.14
2. Reserve Fund:		
Savings	121,702.11	169,374.27
Investments	242,488.50	122,009.88
3. Student Education Fund		
(Notes Receivable)	79,200.00	76,670.00
4. Property Fund—Fixed		
Assets (Land, Building,		
Equipment—Less		
Depreciation)	240,680.40	242,610.20
<b>LIABILITIES</b>		
Accounts Payable	\$	\$
Accrued Payroll Taxes	1,873.43	1,776.88

OPERATING STATEMENT  
Year Ended December 31, 1972  
(Condensed Financial Statement—January 1-  
December 31, 1972)

	1972	1971
<b>INCOME</b>		
Exhibits and Annual Meeting	\$ 12,735.00	\$ 10,593.50
*TMA Dues	247,577.50	256,000.00
**Journal Advertising (\$29,806.48)	—	31,595.57
Investment Income	16,942.32	16,561.50



Building and Miscellaneous		
Income	8,784.85	9,222.25
<b>TOTAL</b>	<u>\$286,039.67</u>	<u>\$323,972.82</u>
<b>EXPENDITURES</b>	<b>1972</b>	<b>1971</b>
Administrative and		
Auditing	\$128,568.54	\$130,689.99
***AMA Delegates and		
Hospitality	—	***
Annual Meeting—TMA	15,581.18	18,598.89
Attorney	5,950.00	7,000.00
Board of Trustees—		
Committees-Council	17,688.67	7,238.64
Headquarters Building	7,583.16	9,794.37
Health Careers	1,250.00	—
IMPACT	3,000.00	3,000.00
**Journal—TMA (See		
Separate Report)	—	36,182.96
Legislative Expense	7,708.62	7,278.60
***Staff Salaries and Em-		
ployee Insurance	—	—
Taxes	3,851.34	3,522.16
Staff Travel	8,512.85	6,759.69
Headquarters Building		
Construction	—	1,899.11
Miscellaneous and Other		
Expenses	3,138.82	15,016.25
<b>TOTAL</b>	<u>\$202,833.18</u>	<u>\$246,980.66</u>
Excess Journal Costs	(11,282.33)	
Excess of Revenue		
Over Expenditures	\$ 71,924.16	\$ 76,992.16
*Additional Amount of \$16,660.00 of dues allocated to Journal. (See report.)		
**See Journal Income and Expense Report (\$29,806.48 from Advertising).		
***Included in Administrative Expense.		

### THE TENNESSEE MEDICAL ASSOCIATION JOURNAL INCOME AND EXPENSE

Year Ended December 31, 1972

<b>INCOME</b>	<b>Total</b>	<b>Readership</b>	<b>Advertising</b>
Allocation of			
TMA Dues	\$16,660.00	\$16,660.00	\$ -0-
Advertising	29,806.48	-0-	29,806.48
Subscriptions	1,180.75	1,180.75	-0-
	<u>\$47,647.23</u>	<u>\$17,840.75</u>	<u>\$29,806.48</u>
<b>EXPENSES</b>			
Printing and			
Distributions	\$34,243.63	\$21,360.20	\$12,883.43
Editor and			
Board	3,500.00	3,500.00	-0-
Clerical			
Assistance	600.00	600.00	-0-
Clipping Service	641.80	641.80	-0-
Supplies	136.30	136.30	-0-
Overhead			
(Allocated)	19,807.83	13,205.21	6,602.62
	<u>\$58,929.56</u>	<u>\$39,443.51</u>	<u>\$19,486.05</u>
<b>EXCESS</b>			
<b>EXPENSES</b>			
	<u>(\$11,282.33)</u>	<u>(\$21,602.76)</u>	<u>\$10,320.43</u>

REFERENCE COMMITTEE C—reviewed the report of the Secretary-Treasurer and recommended that the report be accepted as presented.

THE HOUSE accepted the report.

### REPORT OF THE JUDICIAL COUNCIL

HARRY A. STONE, M.D., *Chairman*

The report stated that the Judicial Council had held two meetings during the annual session of the Tennessee Medical Association in Gatlinburg in 1972. The principal consideration and work in these meetings and others during the year, have been with the unlicensed physician problem. The Council members, with the Commissioner of Public Health, participated in the discussions of unlicensed physicians, principally those physicians working in hospital emergency rooms. The Judicial Council urged support of the laws of the State of Tennessee and the ethics of the American Medical Association regarding unlicensed physicians. The Council requested the President of TMA in conjunction with the Commissioner of Public Health to notify by special letter all Tennessee physicians, hospitals' Chiefs of Staff, and hospital administrators, of the legal and unethical aspects of the unlicensed physician problem. This was carried out.

The Council met again in December, 1972 in Nashville, and reviewed in depth the many resolutions and statements of policy concerning separate billing by physicians and physician contract practice with hospitals which have been presented to the House of Delegates and passed as official policy of the Association since 1962.

The Council studied guidelines and the problem of physicians working in emergency rooms in order to conform to the legal and ethical requirements.

The Council also studied cases presented to it of unprofessional conduct by indicated physicians.

The report stated that flagrant cases of unprofessional conduct which are brought up to the Council are representative of problems which exist in each Councilor's district. The Judicial Council stated that the laws of the State regarding the practice of medicine should be fully and completely complied with and that the Code of Ethics to which we subscribe should be obeyed. The report concluded by the Chairman calling for compliance and to put forth efforts to not disrupt the practice of medicine



if the alternatives provided submitted by the Council are complied with.

*REFERENCE COMMITTEE D—called attention to sections of the report, particularly the one reading "We need laws similar to the 'Sick Doctor Law' in Florida, where the Licensing Board can suspend license and require physical and mental examination if unable to practice skillfully because of alcohol, drugs or narcotics." It was the recommendation of the Reference Committee that the Judicial Council make a detailed recommendation of a "Sick Doctor Law" and that this be included with proposed changes in the Medical Practice Act, and submit this to the Board of Trustees.*

*THE HOUSE accepted the report.*

## REPORT OF THE EXECUTIVE DIRECTOR MR. J. E. BALLENTINE

The Executive Director abstracted his report and stated that it was not the intent to use the report to repeat or infringe on other reports being made.

Reviewing the record, the Executive Director's report stipulated the increase in the volume of activity and work of TMA, and the involvement of the staff in these activities. In view of the constant change occurring in Medicine and the trends in medical care, unexpected events have demanded from the officers, Board of Trustees, committees and staff, immediate action and rapid determinations.

Therefore the volume of business thrust upon the Association was greater than ever during the past year, as the number and length of meetings of the Board, meetings of the Judicial Council, the multiple committee meetings, the increasing bulk of organizational, management and administrative actions clearly indicates. The voluminous reports of officers, committees and staff presented to the House are only concise summaries which disclose work performed by the Association. The report stated that issues before TMA in the past year have been law and legislation, medical education, the use of paramedical personnel, methods of improving the delivery and quality of health care, peer review, abortions, Professional Standards Review Organizations (PSRO's), medical foundations, emergency medical services, environmental and occupational health, drug addiction control, intra- and inter-professional cooperation, liability and malpractice problems, national health insurance, all of these and a host of others, have been TMA's constant concern. The report revealed that many of these issues

will continue to be the concern of the TMA in the days and months ahead. The Executive Director reported that responsibilities of the staff have been reorganized to clearly set forth the administrative and management responsibility for each staff member. The report revealed for the first time in seven years that the staff had been enlarged by one executive assistant, whose work will be to increase the effort of the growing legislative volume of work. Legislative activity now is to the extent that approximately 100 bills involving health and medical care require the attention of the Tennessee Medical Association during the annual sessions of the Tennessee General Assembly.

### *Staffing*

Attached, as an addendum to the report was a description and duties of the executive staff, defining areas of responsibilities, accountability and authority. With this mechanism, it enables the staff to effectively conduct the work of the Association and relate to the county medical societies. The administration of staff work utilizes the sources of the Association's planning, budgeting and expediting. Within the limits of authority delegated to the Executive Director, the staff proceeds with the effective administrative and management of TMA; makes regular reports to the House of Delegates and the Board of Trustees on the performance of the Association; submits recommendations for consideration of the Board toward strengthening the Association and its program of work and continuously strives to assure maximum effectiveness of staff services.

The report revealed that the executive staff is involved with 150 or more meetings of all types both in and out of state during the year. Legislative activity absorbs a considerable amount of time and planning by the staff. The administration, field liaison, communications, legislation, publications, exhibits, Annual Meeting planning and production, promotions, and governmental matters requires a high degree of organization and administration. Publishing the JOURNAL monthly, the Legislative Log, the TMA Newsletter, and other mechanisms of communications are a part of the administrative process.

The report revealed that through TMA's subsidiary, the Tennessee Medical Foundation, the program of continuing medical education was



inaugurated in October of 1972 with a full time Director.

The Executive Director and staff is responsible for maintaining membership and dues records, conducting official correspondence, notifying members of meetings, officers of their elections, committee members of appointments, and preparing documents of all official meetings of the Association, including financial, accounting and legal matters with TMA's attorney. Multiple assignments are regularly made to the staff, and these have been increasing yearly in number. Responsibility of the Executive Director calls for planning of the TMA Annual Meeting and the annual sessions of the House of Delegates.

The report listed some activities engaged in during the past year, these being only examples of work performed. These included:

1. Fulfilled mandate to bring into being the Tennessee Foundation for Medical Care, Inc.
2. Through our field service staff, fostered close liaison with county societies, officers and members.
3. The National Health Service Corps federal program to get physicians into needy isolated areas of the state.
4. Sponsored TMA's second Legislative Conference in February of this year for legislator contact doctors.
5. Sustained cooperative effort with State and Federal legislators to bring into focus the whole problem of medical care.
6. Provide medical liability insurance coverage through the TMA plan for some 2,600 practicing physicians. All members can participate in any of TMA's insurance programs. Thirteen different insurance plans are made available to the TMA membership.
7. Provided physicians and their families with outstanding popular travel tours at substantial savings.
8. Proceeded with fiscal consciousness in all activities and disbursements of the Association.
9. Attempted to respond quickly and effectively to all requests as well as complaints of TMA members.
10. Successful in getting one of TMA's Delegates to AMA elected Vice Speaker of the AMA House, a responsible leadership position at the national level.
11. Depending upon the issue under consideration, utilized boldness, tact and diplomacy in conveying to government agencies, third party carriers and others, a clear understanding of what the practicing physician in Tennessee stands for and what they will not stand for.
12. Developed a brochure and put into effect a program of physician recruitment of interns and residents, to locate and practice in Tennessee. The brochure sets forth the economic and medical advantages in the State of Tennessee.

### *Membership*

In the area of membership services and benefits, the report detailed the many advantages afforded to TMA members.

TMA's membership increased in the year 1972. Active members of the Association totaled 3,595. Of this number, 263 were in a dues exempt status, which includes veteran members (over age 70), postgraduate and military physicians in training programs or in the Armed Forces.

Total active members of the American Medical Association totaled 3,199. This is 89% of the TMA members that belong to AMA. The increase in membership for 1972 over 1971 was a net gain of 91.

The report detailed communications with physicians as well as visits to county medical societies.

In reporting the financial situation with the TMA JOURNAL, the report revealed that advertising revenue in 1972 was \$29,806.48, a \$1,789.09 decrease in revenue for 1971. Advertising revenues for 1973 are expected to be similar in amounts. Printing and distribution costs of the JOURNAL in 1972 totaled \$34,243.63. Total direct and indirect cost of producing the JOURNAL in 1972 amount to \$58,929.56. This includes overhead items allocated to the JOURNAL.

### *Sponsored Travel*

TMA continues in sponsoring trans-oceanic tours. The Travel Committee initiated an eight-day tour in March, 1973 to Hawaii, in addition to the two-week tour scheduled for August, 1973 to Scandinavia.

### *Addendum To The Report Of The Executive Director A Summary Of Professional Standards Review Organizations (PSRO's)*

A concise interpretation, in summary form, was appended to the Executive Director's report. This information was a descriptive narrative of the important Professional Standards Review Organizations. The summary in clear language explained the technical Section 249(f) of H.R. 1, which is the Federal law dealing with the massive requirements of the PSRO mechanism. It was intended with this summary to help physicians, and particularly members of



the House of Delegates who are leaders of the Association throughout the state, to become informed of this far-reaching Federal law which will be a requirement.

*REFERENCE COMMITTEE D*—reviewed the report of the Executive Director, along with the reports of the Judicial Council, the Board of Trustees, and officers of the TMA, and emphasized the marked increase in the volume of business, activity and work. The Reference Committee made the following recom-

mendation to the end that the Board of Trustees appoint an *Ad Hoc* committee to work with the Executive Director for the purpose of:

- (1) Reorganizing the TMA staff.
- (2) Achieving a salary schedule for the staff which will prevent turnover of key staff personnel.
- (3) Determining the need of additional staff.
- (4) Evaluating cost factors involved in these changes.

THE HOUSE accepted the report.

\* \* \*

## *Abstract of the Minutes of the Meetings of the Board of Trustees, Tennessee Medical Association — Sheraton-Peabody Hotel — Memphis, Tennessee April 11 and 15, 1973*

The Board of Trustees of the Tennessee Medical Association conducted two meetings during the Annual Meeting of the Association in Memphis. The meetings were held at the Sheraton-Peabody Hotel on Wednesday, April 11 and Sunday, April 15.

### RESUME OF THE BOARD MEETING OF APRIL 11, 1973

Members of the Board present were:

C. GORDON PEERMAN, JR., M.D., *Chairman*,  
Nashville

J. KELLEY AVERY, M.D., Union City

THOMAS K. BALLARD, M.D., Jackson

E. KENT CARTER, M.D., Kingsport

JOHN K. DUCKWORTH, M.D., Memphis

ROBERT H. HARALSON, JR., M.D., Maryville

JAMES W. HAYS, M.D., Nashville

EDWARD G. JOHNSON, M.D., *Vice Chairman*,  
Chattanooga

MORSE KOCHTITZKY, M.D., Nashville

JOHN H. SAFFOLD, M.D., Knoxville

WILLIAM T. SATTERFIELD, SR., M.D.,  
Memphis

OLIN O. WILLIAMS, M.D., Murfreesboro

GEORGE A. ZIRKLE, JR., M.D., Knoxville

Also attending were: WILLIAM H. EDWARDS, M.D., Nashville, Vice Speaker of the House of Delegates, and members of the TMA staff.

(1) The appointments to the Standing and Special Committees of the TMA made tempo-

rarily at the January Board meeting, were finalized. Several changes were made due to the inability of some members appointed originally to serve. (A copy of the composition of the Standing and Special Committees of TMA are on file in the headquarters office.)

(2) The Board confirmed actions of the Executive Committee wherein several emergency items were acted upon by the Executive Committee. The actions were approved by the Board and a copy of the Executive Committee Meeting Minutes became a part of the official Board's transactions.

(3) A final approval to increase JOURNAL advertising rates amounting to approximately 15% were confirmed by the Board to begin July 1, 1973.

(4) The Trustees approved, following study by the special *Ad Hoc* Committee on Abortion, a resolution to be presented to the House of Delegates at this session.

(5) *Meetings of the Board*—A motion was made and adopted that the Trustees continue to conduct quarterly meetings with special called meetings when required, and that the Executive Committee meet at designated times between quarterly meetings of the Board of Trustees. The Board also selected the place and dates for the July Board meeting.

(6) The Board directed the Executive Director to continue temporarily to expend funds



for Board members' expenses for the work of the Tennessee Foundation for Medical Care, Inc. where expenses are necessary. This should continue until funding of the Foundation has been finalized. These expenses will be solely for travel expenses.

(7) *Certificate of Need Legislation*—The Board adopted a motion that the Trustees urge that TMA's position in the Legislature with regard to Certificate of Need not be changed, and recognizes that the Tennessee Hospital Association has attempted to cooperate with our desires in drawing up the bill, but since there are no published regulations to implement H.R. 1, that the bill be delayed until next year when Federal regulations are published.

#### NEW BUSINESS

(8) The Board selected two Trustees to attend each of the Reference Committees for the purpose of furnishing information and interpretation of policy.

(9) *Nurse Practitioners*—The Board adopted a motion approving a resolution submitted by the Interprofessional Liaison Committee which would be presented to the House of Delegates at this session.

(10) The Board directed that Dr. Hays, Chairman of the Comprehensive Health Planning Committee, write a letter to CHP stating the views of the Board pertaining to certain definitions adopted by CHP.

(11) The Board approved the first quarter Financial Statement of TMA operations, filled a vacancy on IMPACT for the Fourth Congressional District, accepted a report on the TMA Student Education Fund, and acted to delay the decision on publishing a Mental Health handbook pending further discussion with the Commissioner of Mental Health.

(12) The Board heard a report from Mr. Ballentine concerning the costs of publishing the TMA JOURNAL. The Trustees referred this matter to the Publications Committee of the Board with the direction that the Committee make a study and report their findings to the Board.

(13) The Board recommended for consideration Dr. John B. Thomison, Editor of the TMA JOURNAL, for a vacancy on the Board of Directors of the State Medical Journal Advertising Bureau.

(14) Heard a report from the Executive Di-

rector on the possibility of an increase in property tax on the TMA headquarters building.

(15) The Board considered the problem, but postponed final action on funding the TMA Continuing Medical Education Program until after the meeting of the House of Delegates.

(16) *Service on AMA Council*—The Board accepted a letter requesting nominees from this Association for vacancies occurring on the AMA's Council on Constitution and By-Laws, Council on Medical Education, and Council on Medical Service. The Board recommended Dr. John H. Burkhart, incumbent on the Council on Constitution and By-Laws, for re-election. Dr. A. Roy Tyrer, Jr., AMA Delegate, was endorsed for consideration to run for a seat on the AMA Council on Medical Service and it was directed that this recommendation be made to the AMA immediately.

#### RESUME OF THE BOARD MEETING OF APRIL 14, 1973

Members of the Board present were:

J. KELLEY AVERY, M.D., *Chairman*, Union City

THOMAS K. BALLARD, M.D., Jackson

E. KENT CARTER, M.D., Kingsport

JOHN K. DUCKWORTH, M.D., Memphis

ROBERT H. HARALSON, JR., M.D., Maryville

JAMES W. HAYS, M.D., *Secretary-Treasurer*, Nashville

EDWARD G. JOHNSON, M.D., *Vice Chairman*, Chattanooga

MORSE KOCHTITZKY, M.D., Nashville

WILLIAM T. SATTERFIELD, SR., M.D., Memphis

CHARLES B. THORNE, M.D., Nashville

OLIN O. WILLIAMS, M.D., Murfreesboro

GEORGE A. ZIRKLE, JR., M.D., Knoxville

NAT E. HYDER, M.D., newly elected to the Board, was not present.

Others attending were: WILLIAM H. EDWARDS, M.D., Nashville, Vice Speaker of the House of Delegates, and members of the TMA staff.

Dr. Kochtitzky, President, called the meeting to order and presided for the purpose of organizing the Board.

(1) The first action taken was the organization of the Board, and Dr. Avery was elected Chairman, Dr. Johnson re-elected Vice Chairman, and Dr. Hays re-elected Secretary-Treasurer. As part of the Board organization,



all Board of Trustee's committees were appointed. These are: *Executive Committee*—Drs. J. Kelley Avery, E. Kent Carter, James W. Hays, Edward G. Johnson, Morse Kochtitzky, and William T. Satterfield, Sr.; *Finance Committee*—Drs. Hays, Satterfield, and Olin O. Williams; *Publications Committee*—Drs. Addison B. Scoville, Jr., Hays, Harry A. Stone, John B. Thomison, Editor, ex-officio, and Mr. J. E. Ballentine, Executive Director, TMA, ex-officio; *Committee on Malpractice*—Drs. Satterfield, Thomas K. Ballard, William H. Edwards, and Stone; *Tennessee Committee for the AMA-ERF*—Drs. George A. Zirkle, Jr., Robert L. Chalfant, and Fenwick W. Chappell; *Memoirs Committee*—Dr. Phillip C. Porch; *Committee on Medical Licensure*—Drs. Francis H. Cole, Avery, Spencer Y. Bell, Howard R. Foreman, Eugene W. Fowinkle, Kochtitzky, Tom E. Nesbitt, John H. Saffold, Mr. Charles L. Cornelius, Jr., TMA Attorney, consultant, and Roland H. Alden, Ph.D., consultant.

Division Coordinators appointed were: Dr. John K. Duckworth—Division on Scientific Services; Dr. Olin O. Williams—Division on Legislation and Governmental Medical Affairs; Dr. George A. Zirkle, Jr.—Division on Communications and Public Service; Dr. Edward G. Johnson—Division on Health Services and Socio-Economics; and Dr. Thomas K. Ballard—Division on Medical Education.

(2) Dr. John B. Thomison, Editor of the TMA JOURNAL, appeared before the Board to discuss the production, cost, makeup and size of the JOURNAL. There was much discussion as to content and cost, and the number of pages of the JOURNAL. The Board adopted a motion giving Dr. Thomison a vote of confidence and appreciation for his efforts in publishing the JOURNAL, and that the matter of publication be referred to the Publications Committee of the Board for further study, with the direction that they make a report to the Board in July, with any recommendations or suggestions in the publication of the JOURNAL.

(3) *Continuing Medical Education Program*—The Board discussed with Dr. Thomison, Chairman of the TMA Committee on Continuing Medical Education, pertaining to financing of the CME program. Discussions centered around the Reference Committee hearings which dealt with how TMA is going to be able to immediately finance the Continuing Medical Edu-

cation Program in view of the termination of grants from RMP, since they will be phased out after June 1973. The Board stated that the Continuing Education program is outstanding, and the Board must find a way to retain it as it is valuable and essential to the doctors of the State of Tennessee.

(4) The Trustees appointed members of the Board of Directors of the Tennessee Medical Foundation. Members are: Drs. Ballard-President, Carter, Haralson, Duckworth, Johnson-Secretary, Thorne-Treasurer, Hyder, Satterfield, and Williams.

(5) The Trustees appointed the members of the Board of Directors of the Tennessee Foundation for Medical Care, Inc., and they are: Drs. Zirkle-President, Thorne, Hays-Secretary-Treasurer, Hyder, Ballard, Duckworth, Johnson, Williams, and Avery.

(6) *Physician's Assistant Bill*—Mr. Hadley Williams requested from the Board guidance for policy on several bills before the General Assembly. These included the Physician's Assistant bill; the Certificate of Need bill; and a licensing act for foreign medical school graduates.

On the Physician's Assistant bill, the Board adopted a motion that Mr. Williams proceed to try as hard as possible to get the amendment sponsored by TMA on the bill in Committee, and continue to work with the ophthalmologists in every possible way to pass the bill sponsored by TMA in the manner introduced.

On the Certificate of Need bill, the Board approved an amendment stating that nothing in the Act shall be construed to apply to the offices, laboratories or any diagnostic or therapeutic facilities privately owned or privately operated by pathologists, radiologists, or other physician practitioners licensed under the laws of the State. Mr. Williams was instructed by the Board to seek and present the amendment to the bill, and if accepted, TMA would not oppose it.

On the foreign medical school graduates issue, the Board adopted a motion that the TMA should approve the stipulation where a foreign graduate being in the United States for a cumulative period of two years as a resident legally within the United States, should be qualified to take the Medical Board examination, rather than the stipulation now requiring that such a graduate be a resident in the United



States for the immediate two years prior to the examination. In essence, a foreign applicant could take the examination if he had been in the United States a cumulative period of two years, where the present stipulation calls for him to be in the United States for the immediate two years.

The Board of Trustees approved that the Chairman of the Board, in the name of the Board of Trustees, write a letter to the Executive Secretary of the Board of Medical Examiners and the Board of Basic Science expressing concern of the time required for recent graduates and those interested on coming into the State, to become licensed, and inquire if there are any steps short of legislation that can be made by regulation that would present a more orderly and coordinated licensing procedure, so that legislation will not be required. The idea is to step up more frequent examinations so that eligible physicians can take the Basic Science, and Board of Medical Examiner's examinations in order to be licensed to practice in Tennessee.

#### NEW BUSINESS

(7) The Board adopted a motion to refer Resolution No. 13-73 to the Board Committee on Malpractice for study and recommendation.

(8) *Privileges and Rights of Medical Students*—Pertaining to Resolution No. 17-73 referred to the Board, a motion was adopted to refer this resolution to the Liaison Committee to Medical Schools for study, and requested that a report be made to the Board of Trustees for the July meeting.

(9) Resolution No. 18-73 and Committee Report Nos. 13 and 22 from the House of Delegates referred to the Board were considered and referred for further study.

(10) *July Board Meeting*—Upon the invitation of Dr. Carter, the Board approved of conducting the meeting in Kingsport if proper arrangements could be made. If not, the meeting would then be held in Knoxville.

(11) *Officer's Report No. E*—On the report of the Executive Director, Reference Committee D of the House of Delegates referred the following recommendations to the Board of Trustees: (1) Study reorganizing the TMA staff, (2) Achieving a salary schedule for the staff which would prevent turnover of key personnel, (3) Determining the need of additional staff, and (4) Evaluating cost factors involved in these changes. The Board called for Executive Session for discussion of this matter. At the conclusion of Executive Session, the Executive Director was recalled and advised that the Board had named a Management-Consultant Committee consisting of Drs. Avery, Kochtitzky, William H. Edwards, Hays and Thorne. The Management-Consultant Committee was authorized by the Board of Trustees to consult and advise with the Executive Director, and to take whatever steps necessary to meet the requirements for personnel, salary and reorganization needed for the Association in the coming years. Mr. Ballentine was given the authority to proceed and instructed to develop a revised staff structure of operation, preparing an organizational staff chart and descriptions of duties and personnel needed, making the plan for long-range to meet the needs of the foreseeable future for staffing TMA. He was directed to have the report ready by the July Board meeting, with implementation to take place at the earliest possible time.

J. KELLEY AVERY, M.D., *Chairman*

J. E. BALLENTINE, *Executive Director*

\* \* \*

## *Abstract of the Minutes of the Meetings of the Judicial Council Tennessee Medical Association Sheraton-Peabody Hotel — Memphis, Tennessee April 11 and 14, 1973*

The Councilors of the Tennessee Medical Association's Judicial Council met in the Sheraton-Peabody Hotel on April 11, 1973 with Dr. Harry Stone, Chairman, presiding.

Members of the Council present were: John O. Kennedy, M.D., Second District; Harry A. Stone, M.D., Third District; Clarence C. Woodcock, M.D., Sixth District; Kenneth J. Phelps,



M.D., Seventh District; Lee Rush, Jr., M.D., Eighth District; Robert E. Clendenin, M.D., Ninth District. Members absent were: James H. Boles, M.D., First District; D. Gordon Petty, M.D., Fourth District; William D. Jones, M.D., Fifth District; John B. Dorian, M.D., Tenth District.

There was considerable discussion of unfinished business concerning the Council, such as unlicensed physicians practicing medicine in Tennessee; separate billing of physicians and hospitals; and the abuse of drug laws.

The Council discussed resolutions to be presented before the House of Delegates, particularly those sponsored by the Council.

The meeting was adjourned with notice that a second meeting of the Council would be held following the closing session of the House of Delegates on Saturday, April 14, 1973.

SECOND MEETING OF THE  
JUDICIAL COUNCIL

The Council convened for its second session on April 14 and re-elected Dr. Harry A Stone as Chairman, and elected Dr. John B. Dorian as Secretary.

The Council considered resolutions adopted by the House of Delegates that required Council action. These included resolutions dealing with telephone directory listings by specialty, acupuncture, corporate practice of medicine and unlicensed physicians.

The Council also discussed a recommendation to look into the matter of a "Sick Doctor Law," this subject to be studied for eventual proposal of legislation in the Tennessee General Assembly.

The Council also considered a matter of a physician advertising in a newspaper, and referred the problem to the physician's local medical society for further investigation and action.

The Council also discussed a situation in Lawrence County where the Public Health Department is rendering primary care to patients. The Council will discuss the matter with the Commissioner of Public Health, and request that health care provided by the Health Department be limited to only those who cannot be provided private care because of financial hardship.

\* \* \*

**SAINT ALBANS**  
**PSYCHIATRIC HOSPITAL**

Radford, Virginia

**STAFF:**

James P. King, M.D.

Morgan E. Scott, M.D.

Edward E. Cale, M.D.

William D. Keck, M.D.

David S. Sprague, M.D.

Delano W. Bolter, M.D.

Terkild Vinding, M.D.

**Clinical Psychology:**

Thomas C. Camp, Ph.D.

Carl McGraw, Ph.D.

Don Phillips, Administrator

George K. White

Asst. Administrator



# 1973 TMA Annual Meeting—House of Delegates Composition

1st Session: April 11—2nd Session: April 14

## EX-OFFICIO MEMBERS

		First Session	Second Session			First Session	Second Session
<b>OFFICERS</b>				<b>MIDDLE TENNESSEE GRAND DIVISION</b>			
President	Wm. T. Satterfield, Sr.	Present	Present	<b>County Society</b>			
President-Elect	Morse Kochtitzky	Present	Present	BEDFORD	John S. Derryberry	Present	Present
Vice-President	Anne U. Bolner	Present	Present		Carl T. Stubblefield	Present	Present
Vice-President	F. Houston Lowry	Present	Present	BENTON-			
Vice-President	Arden J. Butler, Jr.	Present	Present	HUMPHREYS			
House Speaker	Robert H. Haralson, Jr.	Present	Present	BUFFALO RIVER			
House Vice-Speaker	William H. Edwards	Present	Present	VALLEY	Parker D. Elrod	Present	Present
<b>ELECTED TRUSTEES</b>				COFFEE	James M. King	Present	Present
Middle Tennessee	Charles B. Thorne	Present	Present	NASHVILLE			
West Tennessee	Nat E. Hyder, Jr.	Present	Present	ACADEMY	Robert L. Bomar, Jr.	Present	Present
<b>AMA DELEGATES AND ALTERNATES</b>					George K. Carpenter, Jr.	Present	Present
Delegate to AMA	John H. Burkhart	Present	Present		Robert L. Chalfant	Present	Present
Delegate to AMA	Tom E. Nesbitt	Present	Present		Robert T. Doster, Jr. (Alt.)	Present	Present
Delegate to AMA	A. Roy Tyrer, Jr.	Present	Present		James H. Fleming	Present	Present
Delegate to AMA	William O. Vaughan	Present	Present		James W. Hays	Present	Present
Alternate Delegate	William F. Meacham	Present	Present		Albert P. Isenhour, Jr. (Alt.)	Present	Present
Alternate Delegate	David H. Turner	Present	Present		John P. Kinnard, Jr.	Present	Present
Alternate Delegate	Julian K. Welch, Jr.	Present	Present		Joanne L. Linn (Alt.)	Present	Present
Alternate Delegate	Hamel B. Eason	Present	Present		I. Armistead Nelson	Present	Present
<b>PAST PRESIDENTS</b>					Richard P. Ownbey	Present	Present
Past President	G. Baker Hubbard				Phillip P. Porch, Jr.	Present	Present
Past President	Edward T. Newell, Jr.				Robert M. Roy	Present	Present
Past President	Francis H. Cole	Present	Present		W. David Strayhorn, Jr.		
Past President	Tom E. Nesbitt	Present	Present		Charles B. Thorne	Present	Present
Past President	John H. Saffold	Present	Present		Willard O. Tirrill, Jr.	Present	Present
<b>COUNCILORS</b>					Frank C. Womack, Jr.	Present	Present
First District	James H. Boles		Present		Clarence C. Woodcock, Jr.	Present	Present
Second District	John O. Kennedy	Present	Present		John K. Wright	Present	Present
Third District	Harry A. Stone	Present	Present	DICKSON	James T. Jackson	Present	Present
Fourth District	D. Gordon Petty				William A. Crosby (Alt.)	Present	Present
Fifth District	William D. Jones			FENTRESS	Shannon Curtis (Alt.)		Present
Sixth District	Clarence C. Woodcock, Jr.	Present	Present	FRANKLIN	Dewey W. Hood		Present
Seventh District	Kenneth J. Phelps	Present	Present	GILES			
Eighth District	Lee Rush, Jr.	Present	Present	JACKSON	E. M. Dudney		Present
Ninth District	Robert E. Clendenin, Jr.	Present		LAWRENCE	V. H. Crowder, Jr.	Present	Present
Tenth District	John B. Dorian	Present	Present		Carson E. Taylor (Alt.)	Present	
<b>OTHERS</b>				LINCOLN			
Commissioner, Mental Health	C. Richard Treadway	Present		MACON			
Commissioner, Public Health	Eugene W. Fowinkle	Present		MARSHALL	Kenneth J. Phelps	Present	Present
AMA Judicial Council Member	Charles C. Smeltzer	Present	Present	MAURY	George R. Mayfield, Jr.	Present	Present
AMA Constitution & By-Laws, Council Member	John H. Burkhart	Present	Present	MONTGOMERY	Reginald S. Lowe, Jr.	Present	Present
AMA House of Delegates, Vice-Speaker	Tom E. Nesbitt	Present	Present	OVERTON			
<b>DELEGATES</b>				PUTNAM	James L. Breyer	Present	Present
<b>EAST TENNESSEE GRAND DIVISION</b>				ROBERTSON			
<b>County Society</b>				RUTHERFORD	Carl E. Adams	Present	Present
BLOUNT	H. Trent Vandergriff	Present	Present		B. S. Davison	Present	Present
	Elgin P. Kintner	Present	Present	SMITH	Hugh E. Green	Present	Present
BRADLEY	William I. Proffitt	Present		SUMNER	Clarence R. Sanders	Present	Present
	Marvin R. Batchelor (Alt.)	Present	Present	WARREN	J. P. Dietrich	Present	Present
CAMPBELL					J. C. Gaw (Alt.)		Present
CHATTANOOGA-				WHITE			
HAMILTON	Charles H. Alper	Present	Present	WILLIAMSON	Joseph L. Willoughby	Present	Present
	I. Lee Arnold	Present	Present	WILSON	J. C. Bradshaw, Jr.		Present
	Paul E. Hawkins	Present	Present	<b>WEST TENNESSEE GRAND DIVISION</b>			
	H. Barrett Heywood, III (Alt.)		Present	<b>County Society</b>			
	Durwood L. Kirk	Present	Present	CONSOLIDATED	S. Lane Bicknell	Present	Present
	David P. McCallie	Present	Present		Max A. Crocker	Present	Present
	Paul V. Nolan	Present	Present		James H. Donnell	Present	Present
	James R. Royal	Present	Present		John D. Lay (Alt.)	Present	Present
	David H. Turner	Present	Present		Oscar M. McCallum	Present	Present
	George G. Young (Alt.)	Present	Present	HENRY	J. Ray Smith	Present	Present
COCKE	A. James Garbarino	Present	Present	MEMPHIS-			
CUMBERLAND				SHELBY	J. Malcolm Aste	Present	Present
GREENE	C. Darrell Huffman		Present		Glenn M. Clark (Alt.)		Present
HAMBLEN	C. C. Blake	Present	Present		Rufus E. Craven (Alt.)		Present
HAWKINS					Richard L. DeSaussure	Present	Present
KNOXVILLE					Thomas G. Dorrity	Present	Present
ACADEMY	James B. Bell (Alt.)	Present	Present		Hamel B. Eason	Present	Present
	Walter H. Benedict	Present	Present		Allen S. Edmonson	Present	Present
	Mark P. Fecher		Present		Irvin D. Fleming	Present	Present
	J. Vivian Gibbs (Alt.)		Present		Eugene W. Gadberry	Present	Present
	Perry M. Huggin	Present	Present		C. D. Hawkes	Present	Present
	John O. Kennedy	Present	Present		Jean Hawkes	Present	Present
	John E. Kesterson	Present			George S. Lovejoy	Present	Present
	Felix G. Line		Present		Tinnin Martin, Jr.	Present	Present
	Travis E. Morgan	Present	Present		Raymond F. Mayer	Present	Present
	Ira S. Pierce	Present	Present		B. G. Mitchell	Present	Present
	John T. Purvis (Alt.)	Present	Present		Roland Myers	Present	Present
	Richard L. Whittaker				Phil E. Orpet, Jr.	Present	Present
McMINN	R. G. Hewgley	Present	Present		John D. Peeples, Jr.	Present	Present
MONROE	James L. Allen	Present	Present		Huey H. Porter	Present	Present
ROANE-ANDERSON	E. Elliott Kaebnick	Present	Present		J. B. Witherington	Present	
	Joe E. Tittle	Present	Present	NORTHWEST			
SCOTT				ACADEMY	Robert L. Harrington	Present	Present
SEVIER	Charles L. Roach	Present	Present		J. Howard Ragsdale	Present	Present
				TIPTON	W. A. Alexander	Present	Present

The information in the Roll Call was taken from the attendance record cards signed by the Delegates during the meetings of the House, April 11 and 14.



from the  
executive  
director

J. E. BALLENTINE

# MEDICAL DIGEST

NEWS OF INTEREST TO DOCTORS IN TENNESSEE

## RESUME OF ACTIONS—ELECTIONS—TMA HOUSE OF DELEGATES

**ATTENDANCE 927 AT 1973 ANNUAL MEETING . . .** Total physician registration in Memphis, April 11-14, resulted in 607 physicians in attendance, including 37 interns and residents, 35 guest physicians, for a total of 607 Doctors of Medicine . . . Others attending were 17 medical students, 25 guests, 138 exhibitors and 140 members of the Woman's Auxiliary to TMA, bringing total attendance to 927 . . . Physician attendance revealed an increase of 10% over the previous year.

\* \* \*

**FOUR TENNESSEE PHYSICIANS HONORED WITH AWARDS . . .** Dr. Harold B. Boyd, Memphis, was elected by the House of Delegates to receive the 1973 outstanding Physician of the Year Award . . . The Board of Trustees presented three physicians to receive the "Distinguished Service Award." These awards are made to members of the Association who have made eminent contributions to the public welfare or to the advancement of medical science, service to the Association and contributions to the medical profession . . . Receiving this Award were Bland W. Cannon, M.D., Memphis; Henry S. Christian, M.D., Knoxville; and William A. Garrott, M.D., Cleveland, post-humously. Mrs. Garrott accepted the award on behalf of her late husband . . . These awards were presented at the President's Banquet on Friday evening, April 13.

\* \* \*

**1973-74 OFFICERS ELECTED . . .** Installed Morse Kochtitzky, M.D., Nashville, as President; E. Kent Carter, M.D., Kingsport, President-Elect; Robert H. Haralson, Jr., M.D., Maryville, Speaker of the House of Delegates; William H. Edwards, M.D., Nashville, Vice Speaker of the House of Delegates; elected Vice Presidents were: Charles L. Roach, M.D., Sevierville, East Tennessee; George R. Mayfield, Jr., Columbia, Middle Tennessee; and A. Barnett Scott, M.D., Jackson, West Tennessee; James W. Hays, M.D., Nashville, was re-elected by the Board of Trustees as Secretary-Treasurer.

\* \* \*

**BOARD OF TRUSTEES AND JUDICIAL COUNCILORS . . .** Elected to the Board of Trustees to complete the unexpired term of Dr. Carter, was Nat E. Hyder, Jr., M.D., Erwin. Charles B. Thorne, M.D., Nashville, was elected to a three-year term to the Board of Trustees . . . J. Kelley Avery, M.D., Union City, was elected Chairman of the Board and Edward G. Johnson, M.D., Chattanooga, was re-elected Vice Chairman . . . THE JUDICIAL COUNCIL: Elected Councilors were John O. Kennedy, M.D., Knoxville, Second District; David Gordon Petty, M.D., Carthage, Fourth District; Clarence C. Woodcock, M.D., Nashville, Sixth District; James H. Donnell, M.D., Alamo, Eighth District; and John B. Dorian, M.D., Memphis, Tenth



counted on a cumulative basis rather than immediately preceding the date of application for licensure. This change will permit FMG's to return home, if necessary, and will not require a two year wait before applying for licensure if they return to this country.

\* \* \*

**CERTIFICATE OF NEED BILL ENACTED . . .** Legislation to establish a Health Facilities Commission to administer Certificate of Need requirements now in effect under Federal law was adopted by the Assembly. The bill also regulates all other institutions that would have otherwise been excluded by Federal statute. An amendment offered by TMA to specifically exclude the private offices of Radiologists, Pathologists and all other physicians was added prior to final adoption.

\* \* \*

**PRIMARY HEALTH CARE CENTERS . . .** Enabling legislation to authorize the Commissioner of Public Health to establish one or more Primary Health Care Centers as experimental projects has been enacted. The bill authorizes such centers in physician shortage areas of the state. A TMA amendment was adopted which requires the endorsement and approval of the Local County Medical Society prior to a center being established or in the case of a county without a Local Society, the endorsement of TMA.

\* \* \*

**MEDICAID PROGRAM MAY NOW INCLUDE MEDICALLY INDIGENT . . .** Legislation to permit the expansion of Tennessee's Medicaid program to include those individuals whose income is just above that of welfare recipients was adopted. The bill permits medical assistance to be extended to the medically indigent group with the Departments of Public Health and Public Welfare establishing the criteria for eligibility. The services extended to this group may be of more or lesser amounts, duration and scope than those now being provided for current Medicaid recipients.

\* \* \*

**LOAN SCHOLARSHIP PROGRAM ADOPTED . . .** A bill was adopted to establish a Loan Scholarship Program for Medical Students designed to help alleviate the doctor shortage in medically depressed areas. Under the plan, a student may borrow up to \$20,000 toward his medical education. The legislation allows a forgiveness credit against the loan if the recipient agrees to serve in a designated shortage area in the general practice of medicine. A liaison officer authorized by the Act to assist in the implementation will be assigned to the U.T. Medical Units.

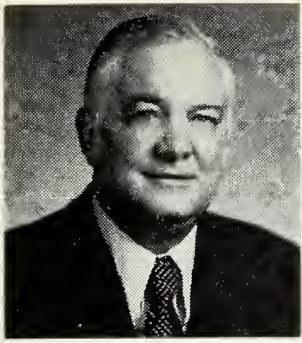
\* \* \*

**PSRO PROPOSAL SUBMITTED TO WASHINGTON . . .** During the 1973 TMA Annual Meeting in Memphis, the House of Delegates adopted a resolution authorizing the Tennessee Foundation for Medical Care, Inc. (TFMC), to take initial steps in developing a state-coordinated, locally operated plan for Professional Standards Review Organizations in Tennessee.

In a subsequent meeting of the Board of Directors of the TFMC, a proposal was approved for submission to the Department of Health, Education, and Welfare requesting that the TFMC be designated as the prototype PSRO in Tennessee. In essence, the draft calls for a two-year contract between the TFMC and HEW to plan, organize, and put into operation a statewide, physician-directed Peer Review System as required by Public Law 92-603, Section 249(f).

The two-year plan as submitted will establish the TFMC as the primary organization responsible for developing and supporting other PSRO's within the state. As envisioned in the proposal, Tennessee would eventually set up 7 PSRO's. Each of the four metropolitan cities (Chattanooga, Knoxville, Memphis and Nashville) would constitute a PSRO area and the counties falling outside the metro areas would make up three Regional (West Tennessee, Middle Tennessee, and East Tennessee) multi-county PSRO's.





MORSE KOCHTITZKY

## president's page

By the time this issue of the JOURNAL reaches you, the Tennessee General Assembly will have been adjourned. Hopefully you will have become aware of many bills which were acted upon, particularly those that directly pertain to Medicine. There were approximately 100 bills which called for study by and opinion of the Tennessee Medical Association. Not all of these measures directly pertained to Medicine, but all had some medical connotations that made it important for the legislators to be interested in Medicine's opinion. With this volume of legislation directly affecting our profession, it has been necessary for TMA to have both Mr. Hadley Williams and Mr. John Coles from our staff, working with the General Assembly on a daily basis.

A number of bills were of direct importance to Medicine. A TMA-sponsored abortion bill failed, and the substitute which was adopted is not at all to our liking. It is a preventive bill, jeopardizes the physician, and I am afraid it will be hard to amend. The Certificate of Need legislation passed handily this year, but only after it was amended at our request to specifically exempt facilities owned by private practicing physicians both with respect to their hospital and office practices.

The Emergency Medical Services Act was adopted very much as proposed by TMA and the EMS Division of the Tennessee Department of Public Health. TMA's Physician Assistant's bill created considerable controversy both within and outside our profession. TMA's House of Delegates had mandated drafting and passage of Physician Assistant's legislation in 1972, which your TMA committee had spent a year preparing. TMA was confronted with an amendment enacted on behalf of optometrists, one of the strongest lobbys on Capitol Hill, which was in opposition to the desires of a small percentage of our members. Your leadership, as well as your representatives on Capitol Hill, found themselves in a very difficult position of trying to carry out the instructions of the House of Delegates and the Board of Trustees, and at the same time satisfy the wishes of those physicians opposed to the bill as amended. As a result, TMA was placed in an untenable position of having our members actually lobbying against the TMA position. This puts our Association in a difficult and almost indefensible position with legislators, and one which we ardently hope can be avoided in the future.

Our plea then is for unity within our profession and in our organized efforts on behalf of the profession. If ever there was a time that we need to pull together, it certainly is now. Infighting has its place, but we need to settle our disputes within TMA in order to present to the public and the Legislature a united front, and a determined effort to accomplish those goals which we know are proper for our patients, the citizens of this state.

Sincerely,

President



# Journal

OF THE  
TENNESSEE MEDICAL ASSOCIATION  
PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL  
PROFESSION OF TENNESSEE

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JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

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JOHN B. THOMISON, M.D., Nashville

JUNE, 1973

# editorial

## TMA: 1972-73

Perhaps the most impressive thing about attending the annual meeting of TMA is seeing the incredible amount of work done in your behalf by a relatively small number of people. You can get some idea of it by reading this issue of the JOURNAL, but a lot of it is buried in committee reports which won't again see the light of day.

In a sense, I feel in writing this editorial a little like the preacher who expounds on the terrors of hell awaiting those who stay away from church. Many of you who read this are among the involved faithful, and a great many of those who are too busy to get involved are like the TMA member and friend (still!) who told me the JOURNAL "just isn't thick enough to make it to the top of the pile." (We should make it thicker?)

The officers, delegates, committees and staff

of TMA, as of organized medicine generally, are faced with a rapidly changing medical scene which demands their constant attention—this in addition to the demands of an active medical practice on the part of all but the staff, without whom, and for which reason, we could not operate. We should all be grateful for their dedication and expertise. Staff, however, no matter how dedicated or knowledgeable, cannot do it alone, because they have neither the time nor the necessary medical background, nor can they, in the public view, speak for medicine.

You cannot afford to remain ignorant of what went on in Memphis in April, because no matter where you live or what your field, things were done which will vitally affect you, either directly or indirectly. I wish in this editorial to call attention to some of them. But this should not be a substitute for your careful reading of the proceedings, because even to mention all of them here is clearly impossible.

The "dead hand of bureaucracy" is increasingly heavy, as governmental controls become more and more apparent. As the president's report points out, regimentation of physicians is being advanced at an alarming rate—witness PSRO, HMO's, Medicare regulations, Phase II and III discrimination, peer review, malpractice liability, certificate of need legislation, and threats of relicensure. One delegate said to me, "I am watching everything I have worked for and believed in go down the drain." Our president sees a discouraging change in attitude of physicians toward accepting this encroachment upon private practice as though it were unstoppable.

We have PSRO legislation. It is a fact. How much it encroaches on private medical practice will depend on where control lies. A resolution to ignore the legislation by non-cooperation was soundly defeated—fortunately, because mechanisms exist in the law for control by non-medical groups, should we fail to take the initiative. I urge you to read and take to heart Resolution 9-73, which was adopted, and be prepared to render whatever service it requested of you by your local medical society. We must not fail in this, because to fail will mean total governmental control.

Compliance with Public Law 92-603 (PSRO) has not only utilization requirements, but provision for review of quality of medical care. Implicit in this is an adequate continuing med-



ical education effort on the part of each of us—for the sole purpose, in spite of what our detractors say, of improving patient care. But it must be based on demonstrated need, and will undoubtedly have to be documented in a more official way than presently. Your Continuing Medical Education Committee is working for you in this area, and requires your support.

How do we meet the medical needs of the rural areas? The problem is one of increasing urbanization and specialization which has left some of the more inaccessible areas virtually without medical care, and has isolated the few hardy souls who do serve them. This knotty problem is being addressed by TMA through its Rural Health Committee, and through other channels. Answers lie partly in recruitment of physicians to these areas by a positive approach, pointing out their often superior scenic and recreational qualities. But the problem of isolation, both professional and social, looms large for the physician and his family, and though this is mitigated somewhat by the improvement of the highway system, many areas remain relatively inaccessible, and schooling is always a problem.

One part of the answer seems to be in the nurse practitioner, the legalities of which are presently unclear. TMA is working with TNA and appropriate state agencies to clear the way legally, and the practitioners are being trained in several institutions in Tennessee. Another part of the answer is the Health Service Corps; but we need other innovative ideas, and inducements to young physicians to go to and remain in these areas.

Much can be accomplished by better utilizing existing services and facilities, which have too often been neglected by the medical profession. Rural home health care services need the imaginative leadership of the physicians, and we must become more active in the Comprehensive Health Planning Program. It is easy enough to dismiss this as a bureaucratic mess—and indeed it will be to the extent we let it. It is only as we provide leadership that the “mess” becomes orderly. (Resolutions 2 and 3-73)

One of the problems faced everywhere is emergency care, and attempts to solve the problem have produced problems of their own. It used to be that emergency rooms were staffed on a rotation basis by the doctors on the

medical staff. But we have gotten too busy (or too lazy—or too pre-occupied), and so hospitals have taken to hiring emergency room physicians. In so doing they have run afoul of the medical practices act, not to mention medicine’s code of ethics, which says that no physician may allow his services to be disposed of by any non-professional corporation (which includes hospitals) for a fee. It has taken years to get the pathologists, radiologists, and anesthesiologists into a legal and ethical stance, and now the spectre again raises its head. (Resolutions 7 and 8-73)

If we are to assimilate medical graduates quickly into organized medicine, a relationship with them must be fostered during their student days. This should not require any student organization, such as SAMA, as an intermediary, since many students have objections to SAMA. The way should be opened for some form of student membership in TMA. A resolution concerning privileges and rights of medical students (Resolution 17-73) was referred to the Board of Trustees for recommendations, since changes in the constitution might be required.

In this day when unity in the medical profession is so desperately needed, for reasons which should be obvious to you, and when some are going so far as to suggest unions as the solution, we cannot afford to ignore, much less to alienate, our future doctors, when to win their support might cost us only a little time and effort and a show of interest.

Well, it was an exciting year, what with all that, as well as much else, such as abortion decisions and legislation, and of course acupuncture. But the excitement didn’t end on Saturday, April 14. As a matter of fact, it has only just started. In case I didn’t touch your particular bag, there is a lot more mentioned in the reports—and there’s something for each of you to do. All you have to do is be willing to get involved. Otherwise, you have nothing to lose but your practice.



GOLLEY, Paul M., Venice, Florida, died April 3, 1973, age 66. Graduate of University of Wisconsin School of Medicine, 1933. Member of Chattanooga-Hamilton County Medical Society.



HEUER, DOUGLAS, JR., Sweetwater, died April 28, 1973, age 60. Graduate of University of Tennessee Medical School, 1937. Member of Monroe County Medical Society.

MASON, ALFRED DOUGLAS, JR., Memphis, died May 2, 1973, age 72. Graduate of University of Tennessee Medical School, 1923. Member of Memphis-Shelby County Medical Society.

## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### **BLOUNT COUNTY MEDICAL SOCIETY**

Alex G. Chromis, M.D., Louisville  
Colin L. Kamperman, M.D., Alcoa

### **HAMBLETON COUNTY MEDICAL SOCIETY**

Alfred P. Bukeavich, M.D., Morristown  
Thomas R. Johnston, M.D., Morristown  
Raymond O. Lowry, III, M.D., Morristown  
David V. Willbanks, M.D., Morristown  
Charles D. Wohlwend, M.D., Morristown

### **KNOXVILLE ACADEMY OF MEDICINE**

G. William Bates, M.D., Knoxville  
John A. Eaddy, M.D., Knoxville

### **LAWRENCE COUNTY MEDICAL SOCIETY**

Dominador Blanco, Jr., M.D., Waynesboro  
Jack R. Crowder, M.D., Memphis

### **LINCOLN COUNTY MEDICAL SOCIETY**

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### **MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY**

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Clair E. Cox, M.D., Memphis  
Howard G. Goldsmith, M.D., Memphis  
James M. Hamlett, III, M.D., Memphis  
Mervin L. Hiler, M.D., Memphis  
William W. King, M.D., Memphis  
William I. Mariencheck, M.D., Memphis  
Dean G. Taylor, M.D., Memphis  
John C. Turley, III, M.D., Memphis  
James E. Wilson, Jr., M.D., Memphis

### **MONTGOMERY COUNTY MEDICAL SOCIETY**

William H. Brigrance, M.D., Clarksville

### **SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY**

Walter Chapman, M.D., Johnson City  
Thomas B. Jones, M.D., Erwin  
William E. Kennedy, M.D., Johnson City

### **NASHVILLE ACADEMY OF MEDICINE DAVIDSON COUNTY MEDICAL SOCIETY**

Dale Maurice Isaef, M.D., Madison  
Sarada N. Misra, M.D., Nashville

## programs and news of medical societies

Physicians across the state were honored recently during Doctor's Day. Some of the county medical societies participating included Bradley County Medical Society, Blount County Medical Society, Greene County Medical Society, Knoxville Academy of Medicine, McMinn County Medical Society, Montgomery County Medical Society, and Roane-Anderson County Medical Society.

### **Greene County Medical Society**

The Greene County Medical Society has offered a proposal to establish a public-type Emergency Medical Services Authority for their area. The Greeneville Emergency and Rescue Squad has given unanimous approval to this proposal.

The squad membership voted unanimously to endorse the medical society's suggestion that such an Authority be set up by the Greene County Quarterly Court and the Greeneville Board of Mayor and Aldermen. Membership on the Authority includes the Administrators of the three Greeneville hospitals, the president of the Greene County Medical Society, the president of the Greene County Dental Association, a registered nurse selected by the district nurses association, the County Physician, the County judge and two magistrates appointed by him, and the Greeneville Mayor and an alderman appointed by him.

### **Knoxville Academy of Medicine**

The Knoxville Academy of Medicine met May 8 in KAM headquarters. Robert O. Morgen, M.D., formerly Associate Professor of Medicine and Chief of Nephrology Section at Baylor University School of Medicine, spoke on "A Clinical Approach to Disorders of Water and Electrolyte Balance." Also, William H. Hartmann, M.D., Surgical Pathologist, Vanderbilt University School of Medicine, spoke on "Thyroiditis—Overall Concept."

A TMA Site Visit Team, composed of two members from the Committee on Continuing Medical Education, attended the meeting for the purpose of evaluating the continuing medical education program.

### **Memphis and Shelby County Medical Society**

The Memphis and Shelby County Medical Society House of Delegates met at the Wassell Randolph Student Center on May 1.

A Scientific Session was held on June 5 which included a panel discussion on "The Interrelationship of the College Coach, the Player, the Trainer, and the Physician."

### **Nashville Academy of Medicine and Davidson County Medical Society**

The Nashville Academy of Medicine and the Davidson County Medical Society met May 8 at Baptist Hospital in Nashville. John F. Farrington, M.D.,



Boulder, Colorado, spoke on "Medical Care Foundations."

In recognition of his 19 years of faithful service as Executive Secretary of the Academy, Jack Drury was presented a plaque, two airline tickets to the Midway Islands and a check representing contributions of society members.

## **national news**

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

Federal health expenditures in the current fiscal year will exceed \$42 billion—an increase of \$2 billion over the previous fiscal year.

The report on *Federal Medical-Health Appropriations*, prepared by the American Medical Association's department of governmental relations, offers a unique view of the federal government's overall involvement in health and health related activities.

In most cases, supplemental appropriations for specific programs are not included, meaning that actual figures are higher than presented. The bulk of the report deals with appropriations, but a table also shows estimated spending this fiscal year on trust fund and other expenditures for disability in various programs including Social Security, Veterans Administration, military disability retirement and railroad retirement.

Considering appropriations, alone, the total for the present fiscal year is \$28.3 billion, compared with \$26.5 billion the previous year. Federal Medicare expenditures of \$9.5 billion are included although \$6.6 billion come from the Social Security Medicare trust fund for part A or hospital benefits. The Medicare law requires these funds to be treated as appropriations by Congress.

The Health, Education, and Welfare department, of course, leads the list in appropriations—\$18.1 billion compared with \$17.6 billion the year before. In order come the Veterans Administration, \$2.9 billion; Defense, \$2.8 billion; Environmental Protection, \$2.3 billion; Federal Employees Health Insurance, \$604 million; Agriculture, \$362 million (animal and plant health inspection, etc.); State, \$258 million; and OEO, \$150 million.

In the non-appropriations area, Social Security payments to disabled workers were \$4.2

billion, service-connected VA disability payments were \$3 billion, non-service connected, \$1.5 billion.

\* \* \*

The president of the American Medical Association filed a vigorous dissent to a federal Commission on Medical Malpractice report which blamed physicians and hospitals for much of the problem.

A central finding of the special commission was that injuries to patients, and not greedy avaricious contingency fee lawyers, are the reason for the increased number of malpractice claims. The report included about 100 findings and recommendations.

In his dissent, C. A. Hoffman, M.D., AMA president and one of the 21 members on the commission, said that the panel had failed in its primary purpose to come up with a program "calculated to ameliorate" the nation's malpractice problems. He said:

"The report does not appear to be calculated to ameliorate such problems to any significant degree. Some of its recommendations, if implemented, would be likely to stimulate an increased frequency of claims. The increasing frequency and cost of claims has an unavoidable adverse effect on health care. . .

"The report fails entirely to identify the problems of medical malpractice claims as what they really are—a part of the much larger and more general problems of liability claims litigation. In the United States, people have always been quick to file lawsuits for any injury, real or imagined. The legal system encourages litigation. There is a definite trend in court decisions to make it continually easier for claimants to recover substantial damages, with less and less proof of fault.

"This trend is well established in all fields of activity including automobile liability, product liability, airline and rail liability, homeowners liability and all others. Malpractice liability is the most visible and harmful part of this trend, because it affects the vital area of health care.

"As a part of this trend certain legal doctrines have been established which apply only in lawsuits against health care providers and which make it easier for claimants to recover damages with little proof of fault. These doctrines include: (a) the 'discovery' rule under the statute of limitations; (b) the application



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When a bill that affects our profession or the public's health comes up for hearings in Congress, who speaks for us?

The AMA.

During the 92nd Congress, officers, trustees and other AMA leaders did a lot of the speaking. On more than two dozen occasions, they testified before committees of the House and Senate. Stating and promoting our views on national health insurance, HMO's, health manpower, rural health and regulations for federal health programs.

These were the men who provided our input—as scientists and practitioners—for legislation

on drug abuse, cancer, emergency medical services, and many others.

Through their testimony, through our lobbyists in Washington, through continuing contact with key legislators, the AMA works to foster your interests and those of the American public.

The AMA *does* represent our profession—and effectively. And it will continue to in the 93rd Congress as it did in the 92nd. With your support, we can be even more effective.

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**We can do much more together.**

American Medical Association  
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of the doctrine of *res ipsa loquitur* to injuries arising out of the performance of professional services; (c) the doctrine of 'informed consent' and (d) a rule allowing liability based on an alleged oral guarantee of good results. If this trend continues unchecked, the logical results will be that health care providers will be held liable for any unfortunate result arising from health care, even if there was no fault on the part of anyone and the result was entirely unavoidable.

"These legal doctrines are one of the most important causative factors for the problems of the increasing cost of frequency of malpractice claims. Instead of making a strong recommendation for appropriate and equitable remedial legislation, the report merely recommends referral of the legal doctrines problems, which it reluctantly admits exist, to some vaguely defined and presently non-existent group which is supposed to develop recommendations for uniform rules of law, 'in the nature of a Restatement of the Law of Medical-Legal Principles.' This is inadequate as a remedy for this major problem.

"I, like other physicians, affirm that any patient who is injured in the course of his health care as a direct result of negligence on the part of any provider is entitled to just and reasonable compensation. Where an injury occurs despite the best of care, however, health care providers should not be unjustly burdened with the cost of compensation. If they are, this inevitably adds to the cost of health care.

"The report gives the false impression that the rapid increase in the frequency and cost of claims has arisen from a deterioration in the general quality of health care. The reality is the frightening paradox that the general quality of health care has been improving dramatically at the same time that the frequency and cost of claims have been skyrocketing.

"The report stresses the obvious fact that there would be no claims if there were no injuries. Where surgery or potent drugs are required, the risk of injury is unavoidable. Only a small percentage of the injuries, however, are caused by the negligence of anyone.

"The report does contain some constructive recommendations. These include: (a) development of injury prevention programs, (b) study of alternative compensation systems, and

(c) data collection, if limited by careful cost justification."

\* \* \*

Malcolm Todd, M.D., chairman of the American Medical Association's Council on Health Manpower, has been appointed to the board of regents of the military medical school which was authorized by the last Congress.

Others named were: Durward Hall, M.D., former GOP Congressman from Missouri; Lt. Gen. Leonard Heaton, M.D., U.S. Army Ret.; Anthony Curreri, M.D., Wisconsin; H. Ashton Thomas, M.D., Secretary of the Louisiana State Medical Society; and former defense official David Packard. Three more regents remain to be selected.

\* \* \*

A sweeping study has allayed the fear that this nation would become flooded with ex-GI drug addicts by finding that very few young soldiers who took narcotics in Vietnam have continued their addiction in civilian life.

The study also presented information indicating the physical grip of heroin addiction may not be as strong as heretofore believed—"one half of all those who reported heroin dependency in Vietnam had withdrawn on their own."

Commenting on the \$400,000 study, Richard S. Wilbur, M.D., assistant secretary of defense for health and environment, declared:

"We now know that recovery from heroin dependency is not impossible and that in the case of young, healthy, well-disciplined men in the armed services, rehabilitation will be successful in the majority of cases."

Dr. Wilbur compared the narcotic dependence rate of 1.3 percent among Vietnam returnees with the 1.2 percent rate of drug abusers identified in the civilian population of young draftees and recruits. He estimated the number of addicts of all Vietnam veterans at about 2,000 to 3,000 of the 313,000 enlisted men who served in Vietnam during the high use period in the last several years of the war. Little heroin was used prior to this by U.S. troops.

The study, prepared under the direction of Lee Robins, Ph.D., Professor of Sociology in Psychiatry at Washington University, was originated by the special White House action office on drug abuse and funded by the Defense Department, the Veterans Administration, the National Institute of Mental Health and the



Labor Department. Some 900 men were interviewed.

Dr. Wilbur told a Pentagon news conference that there are many myths surrounding addiction. "I was taught that anyone who ever tried heroin was instantly, totally and perpetually hooked," he said.

"Treatment success rates were reported to be less than 5 percent. Therefore the use of methadone maintenance for all heroin addicts and even legalization of heroin seemed desirable to some advocates because it seemed impossible to get off heroin."

But the accumulating data being gathered by Defense in the wake of the Vietnam drug crises, including the latest report entitled "A followup of Vietnam drug users," has caused "us to reexamine the old beliefs more critically," said Dr. Wilbur.

The followup study said that only 7.2 percent of the men who had been detected as narcotic users in Vietnam had felt narcotic dependent at any time since their return. Dr. Wilbur pointed out that 93 percent of the men who had been identified in the service as drug users had not returned to their drug dependence upon return from Vietnam. This closely parallels estimates of success in Defense rehabilitation programs.

Dr. Wilbur, in referring to in-service treatment programs, reported more than 70,000 men had been treated for drug abuse with more than 59,000 either restored to duty or released from active service following successful rehabilitation, more than 6,000 men remained in short term rehabilitation and 4,000 more had been referred to the Veterans Administration for lengthier treatment at the end of their service tour.

\* \* \*

The National Institutes of Health have announced a ban on research involving live aborted fetuses.

The restriction applies only to NIH-supported research but it is expected to be observed in much of the other medical research in this country.

Dr. Robert Berliner, NIH deputy director for science, said:

"We know of no circumstances at present or in the foreseeable future which would justify NIH support of research on live aborted human fetuses."

Dr. John F. Sherman, NIH acting director,

said any scientist receiving NIH funds found to be doing experiments on live aborted human fetuses would be asked to stop even if NIH funds were not allotted to that particular research.

The ban did not apply to fetal tissue but only on live fetuses capable of being kept alive under laboratory conditions for several hours after abortion.

The NIH announcement was prompted by a protest march being planned by seniors at the Stone Ridge Country Day School of the Sacred Heart, a Roman Catholic school for girls adjacent to the NIH in Bethesda, Maryland.

\* \* \*

Chairman Russell B. Long (D., La.) has reorganized the Senate Finance Committee into six subcommittees, including one on health which will hold hearings and do the other spadework on legislation dealing with Medicare, Medicaid and national health insurance. The full committee will continue to make the final decisions.

Sen. Herman Talmadge (D., Ga.) is chairman of the health subcommittee. Other members are: Democrats—J. W. Fulbright (Ark.), Vance Hartke (Ind.), Walter F. Mondale (Minn.) and Abraham Ribicoff (Conn.); Republicans—Robert J. Dole (Kans.), Clifford P. Hensen (Wyo.), Bob Packwood (Ore.) and William V. Roth, Jr. (Del.)

Hansen and Hartke are two of the four chief sponsors of the American Medical Association national health insurance legislation, Medcredit. Packwood is a co-sponsor.

## personal news

DR. HAROLD ALPER, Chattanooga, President of the Chattanooga-Hamilton County Medical Society, presided at the recent installation of Auxiliary officers.

DR. EBERHARD F. BESEMANN, Chattanooga, has been named Fellow in the American College of Radiology.

DR. HAROLD B. BOYD, Memphis, was named Outstanding Physician-of-the-Year at the Annual Meeting of the Tennessee Medical Association in Memphis.

DR. WILLIAM O. CAMPBELL, Copperhill, has been elected to active membership in the American Academy of Family Physicians.

DR. ROBERT E. CLENDENIN, JR., and DR. JAMES H. RAGSDALE, both of Union City, have



been named Fellows in the American Academy of Family Physicians.

DR. THOMAS G. CRANWELL, SR., has completed requirements to retain active membership in the American Academy of Family Physicians.

DR. TAYLOR FARRAR, Shelbyville, has been named recipient of the Distinguished Service Award of the National Football Foundation and Hall of Fame.

DR. JAMES W. HALL, Trenton, and DR. ARTHUR WALKER, Waverly, have been named to the Medical Advisory Staff of Extendicare, Inc. They are among 21 physicians named to the Medical Advisory Staff.

DR. JAMES C. HUDGINS, JR., Lawrenceburg, has been elected to active membership in the American Academy of Family Physicians.

DR. C. D. HUFFMAN, Greeneville, has been elected Chairman of the newly established Greene County-Greeneville Ambulance Authority.

DR. N. E. HYDER, JR., Erwin, has been elected to the Board of Trustees of the Tennessee Medical Association.

DR. CHARLES McDONALD, Nashville, Director of Children and Youth Services, has resigned that position.

DR. JOHN H. SAFFOLD, Knoxville, recently discussed "The Aging Process" at the Senior Citizens Center.

DR. PHIL C. SCHREIER, Memphis, was the winner of the Color Television Doorprize at the TMA Annual Meeting in Memphis.

DR. J. EDGAR YOUNG, Sweetwater and DR. HELEN RICHARDS, Athens, were both honored recently by the Sweetwater Valley Woman's Medical Auxiliary for forty years' service in the field of service in the field of medicine.

announcements

CALENDAR OF MEETINGS

STATE

June 19-20 Upper Cumberland Medical Society, Red Boiling Springs

NATIONAL

June 20-22 Endocrine Society, Sheraton-Chicago Hotel, Chicago

June 23-24 American Diabetes Association, Drake Hotel, Chicago

June 24-27 American Association of Plastic Surgeons, Waldorf-Astoria, New York

June 24-28 American Medical Association, Americana Hotel, New York

July 22-27 Flying Physicians Association, Sheraton-Harbor Island, San Diego, California

August 2-4 Rocky Mountain Radiological Society, Brown Palace Hotel, Denver

Meharry Medical College CME Courses

The following continuing education courses are being offered by the Meharry Medical College during 1973:

November 3 Radiation Technology, Learning Resources Center

Vanderbilt University CME Courses

Date	Title, Location, Program Coordinator
July 11-12	Kentucky Medical Association, Annual Meeting, Lake Barkley, Kentucky
Sept. 19-21	Endocrinology (American College of Physicians) Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.
Sept. 26-28	The Injured Child (American Academy of Orthopedic Surgeons) Underwood Auditorium, Vanderbilt, John Connolly, M.D.
Oct. 10-12	Hypertension (American College of Cardiology) Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.
Oct. 25-27	Child Neurology, Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

1973 POSTGRADUATE COURSES

These courses are arranged through the cooperation of the directors and the institutions involved. Registration forms and requests for information are to be directed to: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104. Tuition Fees: ACP Members and Fellows, \$80; Non-Members, \$125; Associates, \$40; Other Residents and Research Fellows, \$80.

Date	Title and Location
June 18-22	CLINICAL ASPECTS OF BLOOD TRANSFUSION, Michigan State University, East Lansing, Mich.
June 25-29	ADVANCES IN INTERNAL MEDICINE: RECENT PERSPECTIVES, 1973, Banff, Alta, Canada

AAFPRS WORKSHOP

The following workshop is being co-sponsored by the American Academy of Facial Plastic and Reconstructive Surgery with various medical schools. All are accredited by the AMA Continuing Education Program.

*Cosmetic Surgery of the Aging Eye*, June 22-23, 1973. Follows immediately the workshop at the Mount Sinai School of Medicine, New York City. Address inquiries to Mrs. Minerva L. Brown, Registrar, the Page and William Black Postgraduate School of the Mount Sinai School of Medicine. Fifth Avenue and 100th Street, New York, New York 10029.



## **American Board of Family Practice Sets Certification Exam Date**

The American Board of Family Practice announces that it will give its next two-day written certification examination on October 20-21, 1973. It will be held in various centers geographically distributed throughout the United States. Information regarding the examination can be obtained by writing Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506.

It is necessary for each physician desiring to take the examination to file a completed application with the Board office. Deadline for receipt of applications at the Board office is August 1, 1973.

## **National Health Council Offers Short Courses**

The National Health Council, through its Committee on Continuing Education announces ten short courses in 1973 selected for personnel of official, professional, and voluntary health agencies and organizations.

The course subjects will include: Comprehensive Health Planning, Consultation Skills, Community Organization in Health Care Services, Executive Development, Leadership Development, and Voluntary Health Agency in the Community.

The ten courses will be conducted by seven universities on various dates ranging from April through August 1973. Cooperating universities are: Columbia University (School of Public Health), University of Florida (College of Health Related Professions), George Williams College (Division of Social Work Education), Indiana University (Graduate School of Business), University of Michigan (School of Public Health), University of Oklahoma (Department of Health Administration and School of Health), and Washington University (Office of Conferences and Short Courses).

Descriptive brochures and other information on these courses may be obtained by writing to: Continuing Education Program, National Health Council, 1740 Broadway, New York, New York 10019.

## **Institute for Sex Research Summer Program in Human Sexuality, July 8-19**

Lecture course, forums on socio-sexual issues, sex counseling symposia, attitude-reassessment program, informal workshops. \$325 includes housing. Registration ends June 18.

Write: Institute for Sex Research  
416 Morrison Hall  
Indiana University  
Bloomington, Indiana 47401

## **Southern Ob-Gyn Seminar**

The 19th Annual Ob-Gyn Seminar will be held again this year in Asheville, North Carolina at the Grove Park Inn, July 22 through July 27. Broad aspects and subjects in obstetrics and gynecology will be presented.

For registration information please contact the Secretary, Dr. George T. Schneider, 1514 Jefferson Highway, New Orleans, Louisiana 70121.

## **Annual Otolaryngologic Assembly October 20-26, 1973**

The Annual Otolaryngologic Assembly of 1973 will be held October 20-26, 1973, in the Eye and Ear Infirmary of the University of Illinois Hospital. The Department of Otolaryngology of the Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, offers a condensed basic and clinical program for practicing otolaryngologists under the direction of Emanuel M. Skolnick, M.D., with Burton J. Soboroff, M.D., as co-chairman. This program is designed to bring to specialists current information in medical and surgical otorhinolaryngology.

Interested otolaryngologists should direct their inquiries to the mailing address: OTOLARYNGOLOGY, P. O. Box 6998, Chicago, Ill. 60680.

\* \* \* \* \*

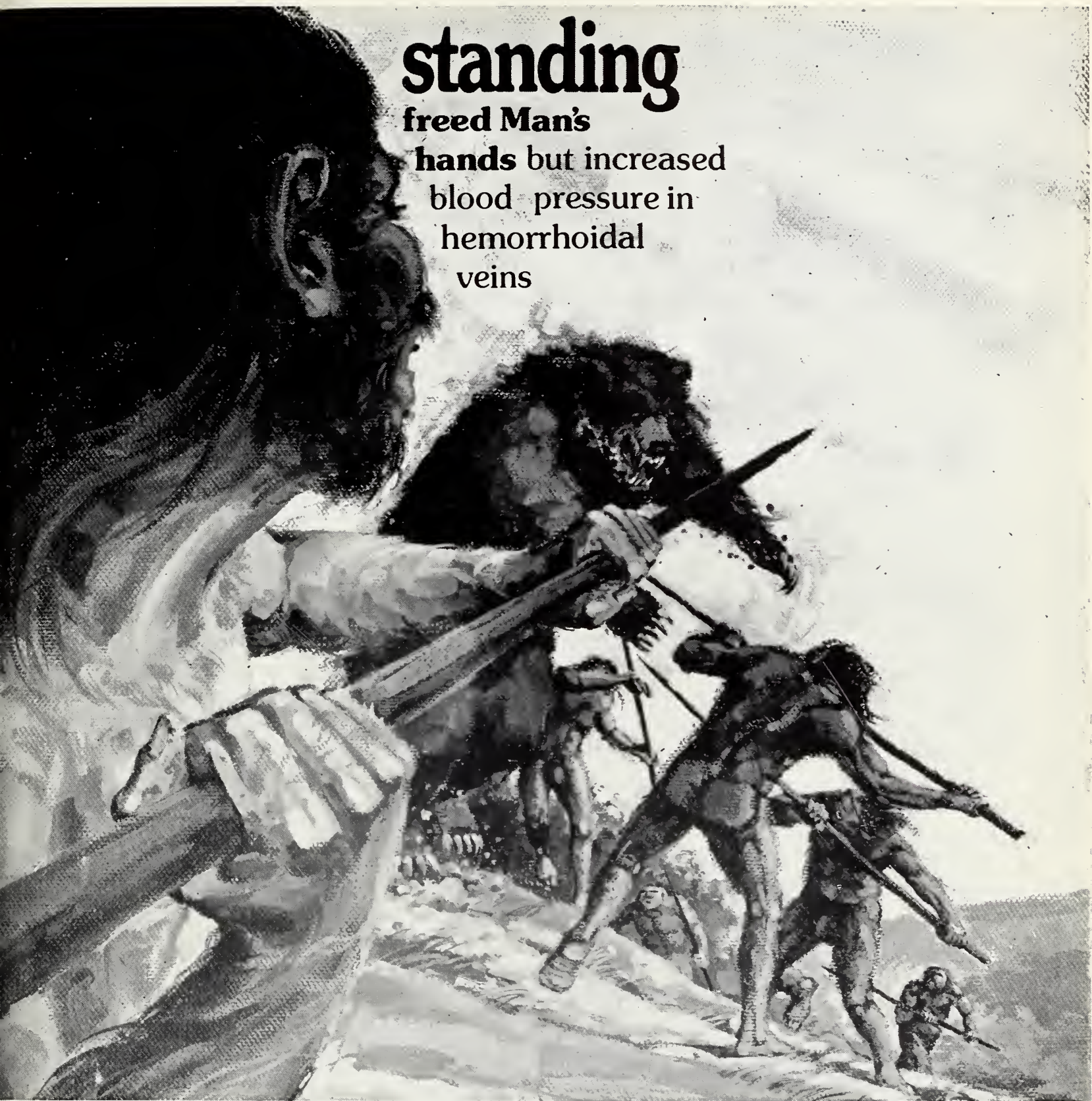
A separate, but correlated course, "CONFERENCE ON RADIOLOGY IN OTOLARYNGOLOGY AND OPHTHALMOLOGY" will be held this year on Friday and Saturday, November 23 and 24, under the guidance of Galdino E. Valvassori, M.D. For further information about the radiology conference, write to Professor Valvassori, Radiology Department, Abraham Lincoln School of Medicine, P. O. Box 6998, Chicago, Illinois 60680.

## **Course in Laryngology and Bronchoesophagology**

The Department of Otolaryngology, Abraham Lincoln School of Medicine of the University of Illinois and the Eye and Ear Infirmary of the University of Illinois Hospital, will conduct a continuing education course in Laryngology and Bronchoesophagology November 12 to 17, 1973. The course is limited to twenty physicians and will be under the direction of Paul H. Holinger, M.D. It will be held largely at the Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, and will include visits to a number of other Chicago hospitals.

Interested physicians will please write directly to the Department of Otolaryngology, Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, Illinois 60612.





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#### INSTRUCTIONS TO CONTRIBUTORS

Manuscripts submitted for consideration for publication in the JOURNAL  
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the Editor, John B. Thomison, M.D., P.O. Box 70, Nashville, Tennessee  
37202.

Manuscripts must be typewritten on one side of letterweight paper.  
Either double or triple spacing and wide margins must be provided to  
facilitate editing which will be legible for the printer. The pages should  
be numbered and clipped or stapled together, but they should not be  
placed in a binder.

Bibliographic references should not exceed twenty in number docu-  
menting key publications. They should appear at the end of the paper.  
The bibliographic references must conform to the style used in the  
American Medical Association publications, as,—Alais, FG: What is Known  
About it, J. Tennessee M. A., 35:132, 1950.

Illustrations should be numbered and identified with the author's name.  
The editor will determine the number, if any, of illustrations to be used  
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Engraving cost for illustrations in excess of \$25 will be billed to the  
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If reprints are wanted, the desired number should be indicated in the  
letter accompanying the manuscript. No reprints are provided free and  
a reprint cost schedule will be forwarded upon request.



## *Current Orthopedic Situation in Vietnamese Civilian Hospitals\**

PAUL SPRAY, M.D., Oak Ridge, Tennessee

Orthopedic surgery in the civilian provincial hospitals of South Vietnam still seems to be almost entirely traumatic surgery. At least, it seemed that way when I worked in the provincial hospital in Can Tho for a month during November and December of 1972.

Although the number of acute war wounds coming into the civilian hospital was somewhat less than when I worked there in 1967, these were still the bulk of the patients on the orthopedic ward and a very large percentage of the cases on general surgery. The official statistics show that the percentage of hospital admissions due to war injuries in the civilian hospitals had dropped from about 14 per cent to about 7 per cent during the years from 1969 to 1971. While these figures for the whole delta region of Vietnam may have been accurate, the percentage of war wounds at the hospital in Can Tho seemed higher, maybe just because I was mostly seeing surgical patients. (I hope that the number of civilian casualties has dropped even further with the cease fire.)

Can Tho is the capital of the delta region, about 110 miles south of Saigon. The hospital there is the largest in the region, with about 500 patients. The second largest group of orthopedic patients seemed to be traffic accident victims, especially from riding motorcycles and scooters on the congested streets. There were also some cases of poliomyelitis and bone and joint tuberculosis.

Most fractures, whether simple or compound, were treated in casts or traction in the civilian hospital. At the military hospital, which was right next door, the facilities and equipment were better, and more open reductions were done. I was assured that they had a minimal

incidence of postoperative infection.

Emergency cases were being handled fairly well and much more promptly, especially during the night, than when I was in Can Tho five years ago.

Amputations were still so common that they were being done mostly by medical student-interns. There is a rehabilitation center in Can Tho and I understood that these patients are able to obtain both upper and lower extremity prostheses. The rehabilitation center had operating room facilities that had not been used, as the surgeon in charge was in the United States for further training. In the future this center will probably be used for reconstructive surgery.

No compression plates were available in Can Tho. Rush pins were used quite a bit in the military hospital, but only Thornton plates and Kuntscher nails were available on the civilian side.

There were many traumatic aneurysms and peripheral nerve injuries and, of course, a lot of traumatic osteomyelitis.

Sutures, dressings, intravenous fluids, and the instruments which were available in the Government of Vietnam catalog seemed to be in good supply. Skin preparation consisted of washing with pHisoHex, which seemed to me a rather expensive and not very effective method—but I saw very few infections in clean surgical cases. None of the newer antibiotics were available in the hospital, but many could be bought by patients in the open market, if they could afford them.

There was no portable x-ray in the operating room. Blood seemed to be fairly available. I was told it was obtained from Army recruits. There were still some flies, gnats, and mosquitos in the operating room, but they were less

\* Presented at the annual meeting of the Tennessee Orthopedic Association, Memphis, Tenn., April, 1973.



prevalent than when I had been there before.

The man in charge of orthopedic surgery was a recent medical graduate, Dr. The, who had been trained in Saigon, partly by Dr. Norman Hoover, who is head of the American Medical Association School program.

In Saigon, the facilities were, of course, better, especially in the Binh Dan Hospital where Dr. Hieu, and several other Vietnamese orthopedists, work with faculty from the University of Saigon. Dr. Hieu worked with volunteer orthopedic surgeons from the Hope Ship, and also Medico volunteers during the years from about 1960 to 1965. He and his colleagues do reconstructive surgery for poliomyelitis, scoliosis, and tuberculosis. Another well trained surgeon who had worked with American volunteers in the past, did a Krukenberg amputation at the Cong Hoa Military Hospital while I was there. Unfortunately, however, this well-trained surgeon, like other surgeons in Vietnam, has been forced by economic necessity to abandon hospital surgical practice for a private clinical outpatient practice, in which he rarely uses his surgical skill.

Leprosy in Vietnam is treated in separate hospitals. In Saigon, it is treated at the Cho Quan Hospital.

Both in 1967 and recently in 1972, I have worked under the American Medical Association Volunteer Physician to Vietnam program, which is scheduled to phase out on June 30. Medico-Care is interested in taking a more active role in Vietnam in the near future, if we are needed and wanted, and things seem settled enough for us to be able to function. There is now an American pediatrician, Dr. Peter Magnus, from San Francisco, working for Care-Medico in refugee camps in the vicinity of Saigon.

(One of the first Medico programs was started by Dr. Tom Dooley in Quang Ngai in the late 1950's. There was a Medico team there until about 1965. There was also a Care-Medico program of volunteer orthopedic surgeons in Saigon from about 1961 to 1965.)

There would seem to be opportunities for Americans to serve as consultants at the new medical school at Hue and also at hospitals in the delta region, with the ceasefire. Two orthopedic surgeons who went to Vietnam with me in November went to Hue and were most enthusiastic about the interest and eagerness shown by the medical students for any type of medical lecture. There is no trained orthopedic surgeon

in the delta area, and the surgeons in the civilian and military hospitals in Can Tho, and nearby Sa Dec, were very cordial to me and expressed the hope we could send orthopedic consultants to help them. Care-Medico is now exploring the possibilities during this period of transition from open war to a ceasefire. We hope also that we can help medical students and doctors in Vietnam obtain books and certain surgical supplies not now available in civilian hospitals.

Seven other Tennessee physicians have worked in Vietnam under the AMA program and at least six Tennessee orthopedic surgeons have worked in various Medico programs. If, and when, a new Care-Medico program opens up in Vietnam, as I believe it will, I hope we can interest Tennessee physicians and surgeons in participating.

There has been a lot of discussion in the journals and newspapers in the last year or two about the use of acupuncture. Another traditional system of medicine used in Vietnam, especially for the treatment of back-ache, is "cupping." I am assured, both by Vietnamese and American patients, that this is effective. In view of the lack of success in treating certain back-ache patients with the methods currently in use in our country, perhaps we should add this to our armamentarium. The cups, made of either glass or bamboo, are heated and then applied to the skin. As they cool, a vacuum forms inside the cup, which draws up the skin and subcutaneous tissue. The rationale may be as obscure as that of acupuncture, but anyway, it seems to help.

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# *Statement of Congressman Wilbur D. Mills\**

## *For the Tennessee Medical Association*

*April 13, 1973*

*Memphis, Tennessee†*

I want to talk to you about two major areas which I know concern you as practicing physicians. The first area is national health insurance and the second area is the significant health legislation enacted as part of Public Law 92-603, H.R. 1 in the last Congress.

These subjects are before us today because of the problems we are experiencing with our health system. The problems do *not* add up to catastrophe as some would have us believe. Our health care system is *not* in a crisis which literally portends the breakdown of our capacity to deliver health care. To characterize the present situation as a crisis is so easily refuted that even non-experts in health care can easily do so. But the charges and countercharges arising from these overstatements get us nowhere—they can blind us too easily to the real problems which exist and retard us from finding common sense solutions to them.

Let me illustrate one of the problems which we know about and which especially concerns me. This is the problem of our increasing dependence on graduates of Southeast Asia medical schools for our physician supply.

Last year we imported about the same number of medical graduates that we produced here at home. It is likely that this year the imports will exceed domestic graduates, even though the number of domestic graduates will increase over last year's number. The great majority will come from Southeast Asia. My concern about this trend stems from what we know about foreign medical graduates as a group. We know, for example, that foreign medical graduates filled 60 percent of the internships in non-affiliated

hospitals in 1970; we know that they do less well on professional examinations than domestic graduates; and we know that they tend to set up practice in the United States in increasing numbers.

The result is that about one in five physicians practicing medicine in the United States today is a graduate of a foreign medical school, and the proportion is rising rapidly. In some states the proportion is higher. More than one-third of New York's physicians graduated from a medical school outside Canada and the United States. The American Psychiatric Association was told last year that an estimated 3,100 foreign-trained, unlicensed physicians form the bulk of the psychiatric staff at State mental hospitals, prisons and institutions for the mentally retarded. It was pointed out that one-third of all psychiatric residencies in 1970 were filled by foreign medical graduates mostly from Southeast Asia and they could speak little, if any, English. As one physician put it, "Imagine the difficulty, for instance, of a psychiatric resident from Korea trying to assess the mental problems of a drug-using American adolescent who is undergoing an existential crisis." There are other recognized problems, such as the maldistribution of physicians, which we could discuss, but I want to keep this brief.

Frankly, I have been impressed by how much physicians themselves are engaged in activities to make things better. This is a most encouraging sign. I have become convinced from my experience as a legislator over more than three decades that legislation cannot by itself solve all of the problems of an industry as large and as complex as our health industry. I must say, though, it appears that the continuing possibility of legislation has some influence on encouraging the health professions to recognize and seek solutions to serious problems in American health care. But whatever the motivation, I am greatly pleased to see increased recognition of these

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\* Chairman, Ways and Means Committee, United States House of Representatives.

† Congressman Mills was prevented by illness from attending the Annual Meeting of TMA. His statement, of more than usual interest at this time, is therefore printed here. (Ed.)



problems and the work that is being done toward finding solutions to them.

As many of you know, Senator Kennedy and I have been holding conversations from time to time to see how much common ground there is between us on national health insurance.

We have agreed on several basic principles, and I should like to present them very briefly.

1) America has the responsibility of seeing that every American family is offered the best in health care whenever they need it, regardless of their income, their place of residence, or any other factor.

2) The federal government should assume this responsibility by establishing a system of national health insurance which assures that all Americans are covered by a comprehensive set of benefits, supplemented by protection against catastrophic health care costs.

3) The system should include incentives and controls to assure that they are of high quality and efficiently delivered and to slow down inflation in health care costs.

These three principles seem to me to be basic to an effective health insurance system in the United States. But they must be accompanied by other principles which retain the most important features of our present system.

Senator Kennedy and I have agreed, therefore, to the following four specific guarantees with respect to free choice in American medicine, each of which must be an integral part of any national health insurance legislation.

1) The federal government must not remove the freedom of each and every physician and each and every patient to choose where and how they will give or receive health care.

2) The federal government must not take over ownership of the various elements of the health care system.

3) Neither the federal government nor any of its agents should make any medical judgments with respect to a patient's care; this function is reserved solely to the responsible physician and his peers.

4) The federal government should *not* make community policies but should offer financial and technical support and information and guidelines based on national planning to support local policy formulation.

I can assure you that whatever Senator Kennedy and I may work out together in the future will incorporate these principles.

I should like to move now to review with

you just one or two of the 95 separate provisions in H.R. 1 which modified the medicare and medicaid programs. As most of you know, those eligible to receive disability benefits under social security will be covered under Medicare beginning next July. This is an extremely important provision which will cover an additional 1.7 million people under Medicare bringing the total to about 22 million people or just about 10 per cent of the total population.

For example, here in Tennessee about 42,000 disabled people will have Medicare protection beginning next July. As you know from your own experience these people need substantially more health care than other people and this new coverage will be a boon to them as well as to those who may be responsible for seeing to their medical needs. The cost of providing Medicare protection to these 26,000 Tennesseans will be about \$33 million a year.

Most of the other provisions in H.R. 1 are designed to improve the operating effectiveness of the Medicare and Medicaid programs. And most of these relate to institutional services and do not directly involve practicing physicians to a large degree. There is, however, one provision which I think deserves some attention here because it does directly involve practicing physicians. As you know, the new law contains Senator Bennett's proposal for the establishment of Professional Standards Review Organizations (PSRO's). I should like to tell you about the changes which we made in the conference committee which substantially improved this provision.

First, the House conferees insisted that no PSRO could be established for two full years unless it was under the general auspices of organized medicine. This will assure that adequate time is available for practicing physicians to organize themselves without HEW threatening to use some other method.

Second, we insisted that the PSRO will not have to review services provided in doctors' offices unless it decides it wants to. Only institutional services would be required to be reviewed.

I know that many such organizations have already been brought into existence by practicing physicians in many places and many more are being organized at this time. We got HEW people to agree that in working out this new provision, they should use extensively those physicians who already have experience, rather



than HEW bureaucrats, in advising physicians how such an organization could be set up. I hope they will carry out this agreement. I would urge those of you who are interested in this new proposal to seek out these other physicians who have some experience. I have become convinced that these kinds of organizations can do an effective job but we will have to make sure that they stay under the control of practicing physicians.

These then are the two major areas in health care with which the Committee on Ways and Means is involved. It is quite clear that there will be no additional health legislation out of the Ways and Means Committee until the work on national health insurance is completed. Any other changes in Medicare and Medicaid will wait till then because the Committee has other items on the agenda, such as tax reform and trade matters.

I should like to conclude my remarks by

repeating my position that the impetus for real and lasting change in our health system must come largely from those working within it. The problems of rising costs, of disorganized and ineffective methods of providing health care, of increasing dependence on foreign medical graduates so desperately needed in their own countries—none of these can be solved by government alone. Legislation can effectively support forces for change; it cannot create them. Much of the solution must come from you people, the professionals.

We in Congress will continue to watch carefully the steps you are taking to meet these problems. We will need your thoughtful advice on how legislation can best support emerging solutions to the problems. I hope you will give us your help freely and objectively so that together we can work toward a health financing and delivery system which will be what all Americans deserve.

\* \* \*

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# Is There a Foundation in Your Future?<sup>†</sup>

JOHN F. FARRINGTON, M.D.\*

Several years ago, speaking at the Council for the Advancement of Science Writing, Dr. Fitzhugh Mullan stated that, "Medicine is too important to be left to the doctors."

Representative William R. Cotter, (D., Conn.), apparently not realizing that he, too, has a vested interest in the control of the medical delivery system stated that, "The time is long past when we can afford to have people who have vested interests in the health delivery system dominate and control that system."

Since these utterances, the Federal Government has relentlessly moved to attempt to restructure the medical care delivery system with a series of laws that have created a patchwork quilt of confusing, inefficient, and uneconomical programs. Partly to correct these past problems, a far reaching law was passed by the 92nd Congress. This is Public Law 92-603. One amendment to this law creates *Professional Standards Review Organizations* to review government financed medical care.

In their wisdom, the Congress did recognize the basic axiom that only physicians are qualified to review other physicians. They also recognized that within the review process, considerations of cost and quality must be separated. The law also provides that services shall be rendered only when and to the extent that they are medically necessary and that these services shall meet professionally recognized quality standards. It also places emphasis on providing care in a proper facility.

At face value these provisions are not too different from the Peer Review philosophies developed by physicians. The law mandates that initially there shall be local control over the review process. This local control shall last only so long as the local PSRO can demonstrate a viable review process.

It is this local control provision of the law that we must strive to protect. We must create strong review programs that will withstand the challenges that most certainly will arise from those in government who may wish to subvert

the medical profession in order to attain another end.

The law does hold the physician at risk for violations of the act. This may be accomplished by excluding from the program a physician for failing, on substantial numbers of cases, to comply with the regulations of the law. The Secretary of HEW may also require that the physician pay the government an amount up to \$5,000.00, if the services rendered were determined retrospectively to be medically improper or unnecessary.

Whether or not we like this law, it is reality.

We must either comply with and work to improve this concept of professional accountability or strive to change it by the legislative process. The latter alternative seems rather remote at this time.

Change is inevitable. It has engulfed our profession scientifically, socially and politically as it has all of the institutions of our society.

Whether the changes that take place in the medical care delivery systems of this country come about through the imposition of expedient solutions to satisfy the political ambitions of a few or through a process of thoughtful evolution to satisfy the medical needs of the entire nation depends, in large part, on the leadership that our profession can furnish.

The outcome will depend upon the alternative proposals that we offer—alternatives that will provide meaningful answers to the frustrations and aspirations of groups within our society who have been denied or have denied themselves access to effective medical care because of ignorance, financial inability to participate, or inaccessibility of care.

What must our course be?

An administrative organization can be generated to interface between the implementation of this law and the practicing physician. This must be done so that physicians will have input into the decision making process. It is also essential if physician control over the process of quality medical care through continuing education of both patient and physician is to be maintained.

The Foundation for Medical Care represents one alternative that, if properly structured, can

<sup>†</sup> Presented before the Nashville Academy of Medicine, May 8, 1973.

\* Director of the Colorado Foundation for Medical Care.



maintain a pluralistic delivery system and protect the freedom of both patients and physicians. Foundations have been in operation since 1954. The specific and primary purposes of the first foundation were "to promote, develop, and encourage the distribution of medical services by its members to the people of the area and adjacent areas at a cost reasonable to both patient and physician; to preserve unto its members, the medical profession at large, and the public, freedom of choice of both physician and patient; to guard and preserve the physician-patient relationship and its innumerable benefits; to protect the public health; to work and study in cooperation with the Blue Shield and the Blue Cross plans, and other prepaid medical care plans that provide for periodic and realistic budgeting for medical care and which subscribe to and provide for the freedom of selection and the guarantee of the physician-patient relationship in order to further promote the above purposes; to work with and provide information to the public, Chambers of Commerce, agricultural associations, trade unions, employers' organizations, and other groups and individuals as to the reasonable cost of adequate medical care."

The success of the original foundations in achieving their stated goals is now historical fact.

But just what is a Foundation for Medical Care? What is this organization that proclaims that it can provide quality (effective) medical care at a reasonable cost to all people?

A Foundation for Medical Care is a management system to provide comprehensive community health services. It is an organization of practicing physicians who are concerned with the development and delivery of medical services at a reasonable cost, of guaranteed high quality whatever the source of financing or the consumer group served. It utilizes the existing health care facilities, believes in free choice of physician and hospital by the patient, in the fee-for-service concept of reimbursement while maintaining the service principle, and in local control over the review processes.

A Foundation believes that health is a community problem. It is a problem that pervades all levels of the community life and that meaningful solutions to the problems of health must fit the demonstrated social, economic, and medical needs of each community.

How does a Foundation for Medical Care achieve these goals?

Organizationally, the Colorado Foundation for Medical Care is sponsored by the Colorado Medical Society. The Foundation is, however, a separate and autonomous organization. Administratively, the State of Colorado is divided into 5 districts represented by a Regional Council.

The Board of Directors of the Colorado Foundation is composed of representatives from hospital administration, pharmacies, nursing home administration, doctor of Osteopathy, and 15 doctors of medicine. The Board of Directors is responsible to the corporate body of the Foundation.

The corporate members of the Foundation are the elected members of the House of Delegates of the Colorado Medical Society. They have full responsibility for the operation of the Foundation and have veto power over the actions of the Board of Directors.

Participating membership is voluntary and must be renewed annually. This membership carries with it the responsibility to accept all Foundation principles and contract obligations.

Consumers and other providers of health services have representation in the Foundation through its Advisory Councils. Consumer representation on the Advisory Council is essential to help determine the expectations and needs of the community, to provide the consumer a window through which he may observe the review process and to provide a vehicle by which consumer education can be achieved. The input of other providers of health services is essential so that the Foundation may review health care in its totality.

The backbone of the Foundation's operational structure is made up of three physician-staffed committees: Health Standards, Minimum (insurance) Standards, and Quality Assurance.

The *Health Standards Committee* has been charged with the development of guidelines for medical care and the maintenance of these guidelines so that comprehensive medical care can be guaranteed to all consumers. This committee must work in close concert with all specialty and subspecialty groups within medicine and osteopathy as well as obtaining input from podiatry and other providers of health services. Its members must represent the various geographic areas of the state.

The committee must realize that there can



be variations in the manner in which quality (effective) medical care is provided. It has recognized that the creation of guidelines to define quality (effective) medical care might tend to be restrictive. Hence, through peer judgments, this committee has established guidelines for problems and diseases that represent broad educational goals for all physicians. These can then be used as the templates for the initiation of the process. They cannot render peer judgments.

This committee is also charged with the continuing process of reviewing, and upgrading these guidelines as advancements in medicine are achieved and as changing patterns of health care delivery influence the local standards of practice.

The guidelines are not static points of reference. They are dynamic flow sheets that reflect the changing patterns of quality (effective) medical care.

The *Minimum Standards Committee* is charged with the development of standards for medical insurance that will guarantee accessibility of comprehensive medical care to the community through effective insurance coverage at a marketable price. This committee must work closely with the Health Standards Committee, actuaries, and all segments of the insurance industry to achieve and maintain these goals. This committee's work is a continuing process of evaluation and implementation as change develops in the demonstrated insurance needs of the community.

The *Quality Assurance Committee* is made up of representatives from each of these Regional Councils. *It has been charged with the development and implementation of the peer review process.*

It is essential that peer review be conducted at a local level, that it is done by peers, that lines of communication are guaranteed between the reviewer and the reviewed, that due process be guaranteed and that there be uniformity in the manner in which guidelines are applied to similar cases.

A glimpse into the total review mechanism is helpful if one is to fully understand the process of peer review.

The total process is based on the review of the quality of care provided the patient including documentation of care (Medical Audit), diagnostic steps and conclusions reached, therapy given, appropriateness of utilization (Utilization

Review) and the reasonableness of charges (Claims Review).

Each claim that represents a Foundation covered service is first checked for completeness by a *review clerk* at the State level. It is then compared, by diagnosis or problem, to the applicable guidelines. Predictably, at this point, 85% of all claims can immediately be paid. *No peer judgment has been, or can be rendered by the review clerk.*

The remaining 15% of claims represent some deviations from the guidelines. These must be submitted to a second level of review—*Peer Review*. It is important to understand that deviation from the guideline does not indicate poor medical care; it indicates only that the decision making ability of the guideline is imperfect.

Each contested claim is assigned to a paid *physician reviewer* who practices the same specialty in the same area as the physician being reviewed. This physician reviewer may certify the claim for immediate payment or he may refer the claim to the *Peer Review Committee* with recommendations for action. This then represents the third level of review. The Peer Review Committee, meeting as a body, may either approve the claim for payment or may modify or deny payment.

All peer review decisions must be submitted in writing along with the reasons for their decision. This simplifies the appeals process and also provides feed-back to the Health Standards Committee for possible revision of the guidelines.

It must be constantly borne in mind that this review process is an indispensable part of any foundation program. It is the means by which credibility can be achieved, costs contained, quality assured, reimbursements made on a usual, customary, and reasonable basis, patient and provider profiles compiled and continuing education achieved.

Peer Review must remain a dynamic, ongoing self-evaluation experience for all physicians. This will lead to a program of continuing self improvement and continuing education will be assured.

A Peer Review Committee may deny payment of a claim, but its only other power is that of suggesting a remedial educational experience. It cannot, nor should it be expected to, take punitive actions. If such actions are indicated because of fraud, uneducability or dis-



honesty, they must be taken through accepted legal channels within the Foundation.

What steps can be taken if a physician is found to be providing substandard care in part or all of his practice?

First, a personal contact should be made by a member of the Peer Review Committee. The physician's practice patterns, in relation to his entire peer group, is explained. In most instances, this is remedial. A physician with a well defined area of weakness may be asked to serve on a subcommittee of the Health Standards Committee to investigate and refine the guidelines in his specific area of weakness. In other instances where broader fields of weakness are defined, corrective postgraduate educational measures can be undertaken either locally or in a center for continuing medical education. If necessary, a locum tenens should be provided so that the physician can safely leave his practice for a period of time. In flagrant cases in which a physician is judged to be uneducable after the failure of repeated attempts at corrective measures, he may be dropped from membership in the Foundation. In the rare cases of proven fraud, the physician must be referred by the Foundation to appropriate authorities for action.

New programs have been developed by the Colorado Foundation for Medical Care. For several years prior to the development of the foundation the Colorado Medical Society and the State Department of Social Services operated a hospital utilization program for the Medicaid recipients. This program initially reduced the average hospital stay for this group of patients approximately 1.5 days with no sacrifice in quality of medical care. This was accomplished by caring for the patient in an appropriate facility.

The initial success of this program has prompted the Colorado Foundation to investigate the feasibility of a Certified Admission Program. This program will certify the medical necessity of each hospital admission and certify the anticipated length of stay for each patient. Extensions of hospital stay are granted after a case review by a Peer physician demonstrates medical necessity.

This program will be educational for patients as well as physicians. It must be emphasized that a Certified Admission Program will function only if insurance policies are written the way medicine is practiced, that is, by Foun-

dation standards. It will prevent retrospective denials of payment to the physician.

But what of the future? From this brief discussion of Foundation for Medical Care, it is obvious that all problems have not been faced or solved.

The Colorado Foundation is in the process of developing a *Research and Development Committee*. Ideas will be presented to this committee. They will be investigated, and if worthy, programs will be structured and then tested to improve health care at all levels.

The problems of maldistribution of physicians, both geographically and by specialty must be attacked.

The need to critically review medical education at all levels and the product of these training programs must be undertaken.

The problem of the proper use of Allied Health Personnel in the delivery system must be defined.

Strictly controlled experimentation with a variety of Medical and Health Care Delivery Systems in varying socio-economic settings must be undertaken in order to develop statistics of cost, benefit, and efficiency for each type of program.

The use of Foundation sponsored satellite clinics to provide health care to urban and rural areas unable to attract an adequate physician population should be undertaken.

Programs of "circuit riding consultants" should be expanded so that continuing medical education can be made more relevant by taking it to the physician and gearing it to his particular practice setting.

The proper use of multiphasic screening must be defined.

These are but a few of the problems that the Colorado Foundation for Medical Care will attack in the future.

The question may be asked, "Is there a Foundation in your future?" You must answer this based on the needs of your community. It is important to realize that a Foundation is not an end in itself. It is one means by which organized medicine can meet the challenge of quality, quantity, and cost of comprehensive medical care. It is an administrative vehicle that has the resilience to operate in a variety of settings.

As physicians we have the obligation to provide leadership. We need not capitulate to the pressures of politicians who have a vested



interest in the political gains that can be reaped from the control of the health care delivery system. Without our leadership the capability exists of converting the well publicized crisis in health care into a national disaster.

As physicians, we can be proud of our profession and its achievements. We have a vital stake in the future of the social and economic structure of this nation. We must become activ-

ists for our knowledge in the various areas of medical care cannot be duplicated in government or the university.

We are obligated to make sound, constructive contributions toward finding cures for the illnesses that grasp this nation.

We must guarantee that freedom of choice is preserved for without choice, there can be no freedom.

## **TMA** topics in nuclear medicine

### **Serum Tests for Thyroid Function**

It would be a delight to diagnose overactivity or underactivity of the thyroid gland by a single understandable blood test, like the PBI or BEI. For many years it seemed that this was possible with the PBI (at least in 90% of the cases). Unfortunately, changing environmental conditions plus greater medical sophistication have acted like an iconoclast smashing the image of the "one reliable blood test of thyroid function." The amazing increase in iodide intake by nearly everyone begins in the hospital where some hospitals have reported that up to 10% of their patients have PBI levels unphysiologically elevated due to iodide-containing dyes used in radiology. This, plus the increased intake of iodides in white bread, vitamins, and even some water supplies, have led not only to many more patients having PBI's elevated in an unphysiologic range, but also have led to a lowering of normal values for radioactive iodine uptake throughout the nation.

To further compound the difficulty of relying on the PBI, an entire generation of women have become users of oral contraceptives. This high estrogen intake and consequent high thyroid binding globulin and elevated PBI have further degraded the value of this test. Additional fac-

tors that have reduced the value of the PBI have been the realization that from 6 to 25% of the PBI derives from iodinated proteins that are neither T3 nor T4, and a realization that altered thyroid binding globulin levels or T3 levels may result in a PBI that does not reflect the physiologic functioning of the thyroid gland. Despite the fact that the precision with which PBI's can be measured is at least as good as the precision with which any other blood test of thyroid function can be measured, despite the fact that the units with which PBI measurements are reported throughout the nation have been standardized, and despite the fact that it is a test with which we are all familiar and moderately comfortable, its value has been so severely compromised that many larger centers have either discontinued or discouraged its use.

The T3 binding test, the first test of competitive protein binding analysis used for thyroid function, seemed to surmount some of the difficulties encountered with PBI in that inorganic iodides and non-thyroxine iodinated proteins did not affect the test. The test was excellent for hyperthyroidism. However, the T3 binding test certainly was no panacea since increased thyroid binding globulins (i.e., from estrogen administration) often leads to hypothyroid T3 binding levels in euthyroid patients, while profound myxedema would often lead

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to T3 binding levels in a normal to hyperthyroid range.

The subsequent introduction of the competitive protein binding analysis for T4 was a further improvement in that profound myxedema did not result in false T4 levels. Furthermore, this test was a true test of thyroxine levels and not just a test of iodide (as in the PBI) or relative binding of an exogenous compound (as in the T3 binding test). While the T3 binding test and the T4 test were generally more accurate than the PBI in reflecting thyroid function, any abnormal distribution of those serum proteins that bind T3 and T4 affect the level of T3 and T4 in the serum, since 99.95% of the T4 in serum is protein bound and 99.50% of the T3 in serum is protein bound. Estrogens, testosterone, anabolic steroids, genetic TBG deficiency, and nephrosis and other debilitating diseases that reduce thyroid binding prealbumin, all change the levels of thyroid binding proteins and therefore the serum levels of T3 and T4. Furthermore, some drugs (salicylates, dilantin, etc.) may competitively displace T3 or T4 from its protein binding site.

In 1957 Robin and Rall discovered that there was a dialyzable fraction of total T4 that was not protein bound. This was the free T4. It was subsequently discovered that euthyroid patients with increased thyroid binding globulin levels had a decreased dialyzable fraction, while euthyroid patients with decreased thyroid binding globulin levels had increased dialyzable fractions so that in both cases the free T4 was normal even though the total T4 was abnormal. Conversely, when a patient is either hyperthyroid or hypothyroid the dialyzable fraction varies in the same direction as the total T4 so that the free T4 is outside the normal range (i.e., elevated in hyperthyroidism and reduced in hypothyroidism). This measurement of free T4 represented a significant improvement over T3 and T4 measurements.

While the concept was well-developed in the late 50's and early 60's, the method was very difficult. Many workers have added improvements. In 1965 a PBI was multiplied by a resin uptake of T3 giving a free thyroxine index. The substitution of T4 for PBI then resulted in a "T7" which was also a free thyroxine index. Subsequent use of T4 by competitive protein binding analysis and resin uptake of T4 resulted in still better values for the

free thyroxine index. Since at least eight resin uptake kits and eight commercial T4 kits are available, each with its own variation in methodology and each with its own terminology, the expression of results is almost limitless. While this ridiculous proliferation of tests and the concomitant lack of standardization of nomenclature has understandably led to a great deal of confusion, this does not negate the fact that a well run free thyroxine index (using a resin T4 uptake and a T4 by the Murphy Pattee method) represents a significant improvement over the PBI or T4 or T3 binding.

The measurement of the blood level of triiodothyronine is a relatively new test which is being performed by a few large laboratories across the country. This test has uncovered some cases of hyperthyroidism which were not reflected by the PBI, T4, T3 binding, or free thyroxine level. Unfortunately, standardization of results amongst the few laboratories performing this test has not been accomplished yet and no commercial kits are available. Some very reputable scientists feel that T4 may be a prohormone for T3 (that T4 may be converted to T3 in blood and tissue) and that peripheral utilization of T3 may be one of the most important parameters of hyper or hypometabolic states. If these hypotheses about the significance of T3 prove to be correct, then we are about to enter a new phase of thyroid testing and will have to search for a new panacea.

Robert L. Bell, M.D., *Director*

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## Chills, Fever and Congestive Heart Failure in a 27 year old Pregnant Woman\*

**HISTORY:** A 27 year old Caucasian female was admitted to U.T.M.R.C.H. with a chief complaint of cough, fever, shortness of breath, swelling of feet and ankles, and chest pain that radiated into the left arm.

Her symptoms began approximately 3 weeks prior to admission, for which she was hospitalized in a nearby city at the beginning of the illness. She was told that she had bronchitis and a urinary tract infection, and antibiotics had been started. She was also found to be approximately 3 mos. pregnant. She signed out against medical advice after 2 days. Her symptoms apparently cleared until approximately 1-2 days P.T.A. when she began to have cough, chills, fever, shortness of breath, and swelling of the feet and ankles. Her review of systems revealed urinary frequency but otherwise was entirely negative.

Her past medical history revealed rheumatic fever at age 6, for which she underwent aortic valvular surgery at the age of 20, with splitting of the fused cusps. No prosthesis was inserted. There was no family history of heart disease. She was a gravida IV, para II, ab I. She was allergic to penicillin.

**Physical Examination:** She was a well developed, well nourished female appearing acutely ill. B.P. 92/50; T 100.4°; P 120; R 42. There was poor oral hygiene, with many dental caries. The neck was supple, without masses. There were bilateral subcrepitant rales, but there was no dullness to percussion. There was normal sinus rhythm with tachycardia, and with a Grade vi/vi systolic murmur along LSB radiating to neck and apex. A Gr II short diastolic murmur was present along LSB and in the aortic area. There was a lower abdominal mass consistent with a 3-4 mo. pregnant uterus. There was mild bilateral CVA tenderness. Peripheral pulses were good. The feet were edematous.

**Laboratory Data:** WBC 8700; Hct. 23%; Hgb. 7.3 gm. The peripheral blood smear revealed hypochromic normocytic cells with a normal differential count. Urinalysis showed 4-5 WBC's/HPF. Glucose 135 mg/100 ml; BUN 6; Na 131; K 3.8; CO<sub>2</sub>—21; C1 101. SMA-12 revealed an albumin of 2.5 gm.% with a total protein of 6.0; cholesterol 135; and an LDH of 320 mU/ml (nl. 90-200). An ECG was interpreted as sinus tachycardia with possible left ventricular hypertrophy. Arterial blood gases (on 24% O<sub>2</sub> ventimask) were pO<sub>2</sub>—37, pCO<sub>2</sub>—26.2, pH 7.46. Blood cultures X4 were taken.

**X-ray:** Admission chest x-ray revealed congestive heart failure, pulmonary edema, and cardiomegaly.

**Hospital Course:** She was placed at strict bed rest,

\*The University of Tennessee Memorial Research Center and Hospital, Knoxville, Tennessee.

on a low sodium diet and was given intravenous Lanoxin, Lasix, intramuscular Valium (10 mg), nasal O<sub>2</sub>, and then 2 units of packed RBC's were given later in the day. Her rectal temperatures were all above 100° F. for the first 4 days of hospitalization, then dropped to below 100° for the remainder of her hospital course. On the *second day of hospitalization* she was placed on 1 gm. of Tetracycline p.o. daily. Lasix, nasal oxygen, and Lanoxin were continued. Late in the second day the Erythromycin was increased to 2 gms orally every 24 hours. She became decidedly worse on the second day, becoming lethargic and very irritable. Her arterial blood gases showed a pO<sub>2</sub> of 101, pCO<sub>2</sub> of 35, pH of 7.51, with 98% saturation. An ASO titer was reported as 166 Todd units, and cold agglutinins were negative. Her pregnancy test was positive. At 11:00 p.m. of the second hospital day she was switched to intravenous Erythromycin, 2 gms daily. Her Lasix and Lanoxin dosages were increased.

The 1st blood culture was reported early on the *3rd H.D.* as "gram positive cocci." An echoencephalogram was normal. A lumbar puncture revealed an O.P. of 12 cm H<sub>2</sub>O, and the CSF was xanthochromic and did not clear. CSF studies revealed glucose 40 mg%, protein 43.5 mg%, 7 WBC and 1263 crenated RBC's. Her sensorium remained poor, and she responded slowly to verbal stimuli and to pain. She had no localizing neurological signs. At this point she was skin tested for penicillin allergy using 50 u penicillin intradermally without any apparent reaction. She then was started on increasing dosages of subcutaneous penicillin every hour. After 3 injections, and with no apparent reaction, she was started on Penicillin G 10 million u q 12 hours IV. She remained semicomatose. A brain scan was interpreted as "probably normal." She became more responsive on the *4th H.D.* with improvement in her breathing and slowing of her pulse. Penicillin serial dilutions were bactericidal at 0.098 units/ml. Therapy included Lanoxin, Lasix, nasal O<sub>2</sub>, 20 million u Pen G intravenously daily, IPPB, 1 gm. Na. diet diet, and strict bed rest. Four blood cultures grew alpha Streptococcus. Cerebrospinal fluid showed no growth. Sputum culture revealed a moderate growth of Candida Albicans. Urine cultures were negative.

The patient continued to improve on this therapy even though the rales in her chest never cleared completely. Follow-up chest films continued to show cardiomegaly and some "bilateral central infiltrates" compatible with heart failure. She was allowed to be up in the chair on the *11th H.D.* At no time was there any change in the character of her heart murmurs. On the *15th H.D.* she developed a phlebitis on the dorsum of her left hand. Her pulse was 120 and she had basilar rales, though she was afebrile. Repeat blood cultures were obtained on the *19th H.D.* and her Lasix dosage was increased. Over the next 2 days she developed 3+ pitting edema of the lower extremities, and continued to have a tachycardia with a rapid respiratory rate. The RUQ of her abdomen became tender. An SMA-12 at this time revealed Alkaline Phosphatase 100; CPK 295; LDH 440; SGOT 250, and serum albumin 2.3. The BUN had risen to 29 but the creatinine remained normal. Early on the



21st H.D. a chest x-ray revealed cardiomegaly and a bilateral infiltrate. The suggestion was made on the film interpretation that the infiltrate was compatible with an "allergic reaction or possibly azotemia." A WBC was 18,700 with 89 segs, 7 stabs, 3 lymphs and 1 monocyte. Arterial blood gases revealed  $pO_2$  44,  $pCO_2$  15, pH 7.64. The patient was not on oxygen at this time. The blood culture of the 19th H.D. showed no growth. The patient became more incoherent and suddenly died later in the 21st H.D.

DR. C. GERALD SUNDAHL: The patient presented this morning is a 27 year old woman who was admitted to the hospital with complaints suggesting a cardiopulmonary origin, with shortness of breath, peripheral edema, and with suspicious chest pain that radiated into her left arm, suggesting a possibility of coronary insufficiency. Three weeks prior to this illness, she was hospitalized elsewhere with a complex illness diagnosed as bronchitis and urinary tract infection. Pregnancy was also discovered. A brief course of antibiotics seemed to produce interim improvement.

The past medical history is of some interest. She is said to have had rheumatic fever at age 6, although it is not known by what criteria this diagnosis was established. At age 20 she had an aortic commissurotomy. Since it is quite unusual for rheumatic fever to lead to significant symptomatic aortic stenosis by the age of 20, one commonly thinks of congenital aortic stenosis in this age group. The difference between the two lesions may have been determined at the time of the surgical procedure. Is there a description of the valve in the chart?

DR. FRANCIS S. JONES: According to the surgeon inspection of the tricuspid aortic valve after aortotomy, revealed thick, fibrous leaflets which were fused to produce a stenosis, with an orifice estimated at 3 to 4 mm. There was no evidence of calcification. All three commissures were split back near the annulus and, by means of visualization and palpation, there was determined to be no obstruction below the valve. This is a direct quote from the operative report.

DR. SUNDAHL: It then does sound from that description, with the presence of a three cusp valve with rolled and thickened valve edges, that her aortic stenosis was of rheumatic origin. One would predict that long term success from aortic commissurotomy in this type valve would be unlikely. Another interesting point of history is the penicillin allergy. This again is an often overdiagnosed historical abnormality. It is not

unusual to be allergic to components in the mixture other than the penicillin itself, such as the procaine in procaine penicillin. In addition, it has been reasonably well demonstrated that penicillin allergy in the form of skin rashes and other manifestations is not quite the same as penicillin anaphylaxis. This should be kept in mind in situations where one faces life-threatening infections in which the use of the drug may be vital.

Physical examination showed a number of points of interest. Poor dental hygiene is emphasized—a point worth considering in an apparent infectious illness in an individual with valvular heart disease. There was considerable evidence of congestive heart failure, with bilateral pulmonary rales, tachycardia, and peripheral edema. A loud systolic murmur is described, consistent with her aortic stenosis, as well as a short diastolic murmur, possibly that of aortic insufficiency. Little additional is said about her cardiovascular findings, although a number of additional abnormalities could have been searched for which could have been of considerable clinical usefulness, as will be discussed later. The only other point of interest on examination was the early pregnancy.

The initial laboratory evaluation demonstrated a mild anemia, an isolated elevated LDH which, in the presence of anemia and no other abnormality, suggests mild hemolysis. In addition, she had a hypoxemic respiratory alkalosis and metabolic acidosis. Could we see the x-rays please?

DR. KIT BONNETT: On the admission chest x-ray, the heart is enlarged. The cardiac configuration is indicative of aortic valvular disease, with a large left ventricle and dilated descending aorta. The patient is in pulmonary edema, with engorged pulmonary vessels and bilateral perihilar alveolar infiltrates.

DR. SUNDAHL: Did she have calcification anywhere?

DR. BONNETT: No valvular calcifications are observed on these frontal projections of the chest. Frequently, valvular calcifications can be seen with cardiac fluoroscopy when none can be identified on the films.

DR. SUNDAHL: Is the pulmonary congestion venous rather than arterial?

DR. BONNETT: Yes.

DR. SUNDAHL: The electrocardiogram demonstrates a sinus tachycardia with P wave



abnormalities suggesting left atrial enlargement. She has some increase in voltage, which is the only evidence of left ventricular hypertrophy. There is some junctional ST elevation in the early precordial leads, the kind of thing that can be seen commonly in younger individuals. Certainly, there is nothing on the cardiogram to suggest any acute myocardial event such as an infarction, and this leaves her initial pain unexplained.

It would appear that the diagnosis of bacterial endocarditis was considered very early in the course of her febrile illness, since blood cultures were drawn. Therapy was initially directed towards improvement of her anemia and congestive heart failure. However, oral tetracycline was started early and later switched to Erythromycin. These certainly are not frontline drugs in the treatment of bacterial endocarditis. Tetracycline is a bacteriostatic agent which probably would be used in cardiac infections only under the most unusual circumstances. I would suspect that either of these drugs would only serve to suppress and mask her infectious process in a manner similar to that done three weeks prior to her admission here.

Initially, she responded well to therapy, although she soon began to show signs of a CNS insult. The lumbar puncture showed xanthochromic fluid, an elevated cell count, and a minimally elevated protein. Her central nervous system signs were apparently quite diffuse. The development of this sort of complication increases the attractiveness of a diagnosis of bacterial endocarditis, since the incidence of neuropsychiatric symptoms in bacterial endocarditis is exceedingly high, particularly in series in which it is carefully looked for. In excess of 50% of the individuals with any form of bacterial endocarditis will have neuropsychiatric symptoms suggesting, in most cases, spread of the infection by infected emboli to the central nervous system.

As you can see, this looks like a text of neuropsychiatry with the number of syndromes that have been described with CNS involvement secondary to bacterial endocarditis. Some of these syndromes are strictly psychiatric and toxic, and others look much more like cerebrovascular accidents. Just as central nervous system symptoms should be looked for carefully in a patient with bacterial endocarditis, the converse should also be true. The overwhelming

prominence of the neuropsychiatric symptoms may well mask the cardiac signs and be overlooked. This may be particularly common in the older individual, in which CNS pathology and cardiac pathology are both common, neurologic symptoms occurring in up to 80% of patients with bacterial endocarditis.

The complications which can occur are multiple, e.g., meningoencephalitis, septic embolus, mycotic aneurysms with bleeding, cerebral abscesses, or cerebral thrombosis. In addition, there is a wide range of abnormalities to be found in the cerebrospinal fluid, so this may not be particularly useful in establishing the differential diagnosis of the type of complication.

At this point in the patient's hospitalization, it was apparent that she had a serious infection and, after appropriate skin testing, she was started on large doses of penicillin. Blood culture showed streptococcus viridans to be the offending organism. Since penicillin is the drug of choice for the treatment of a streptococcus viridans bacteremia, the skin testing and progressive increase in dosage certainly was appropriate in establishing the safety of the frontline drug. The complications of penicillin therapy, even with an allergic history, may well not be as life-threatening as the infection, and may be easily treated with antihistamines or corticosteroids.

Strep. viridans still is the most common organism found in bacterial endocarditis. This particular organism was apparently quite sensitive in that it was killed by less than 1 unit per cc. of a penicillin dilution. In bacterial endocarditis it must be determined that adequate drug is present in the individual, not only to prevent the growth of, but actually to kill, the organism, and a serum bactericidal test should be performed in all cases. It is generally recommended that the serum be bacteriocidal in a dilution of 1:4 to 1:8 to be certain of adequate penetration into the lesions of bacterial endocarditis. Streptomycin is also recommended as additive therapy in bacterial endocarditis even with a very sensitive strep. viridans. This patient appeared to respond initially to her therapy, only to have a period of sudden deterioration with evidence of possible hepatic and renal failure. Could we see the second set of x-rays?

DR. BONNETT: Sequential chest x-rays made over a three week period show persistent



pulmonary edema which failed to resolve during the patient's hospitalization.

DR. SUNDAHL: It would appear that, radiographically, this woman was in pulmonary edema throughout her entire hospital course of 3 weeks. Obviously, this is most unusual and apparently prompted the radiologist's reading of a possible allergic pneumonitis. Later electrocardiograms demonstrate no significant change other than some ST coving over V5 and V6, which is probably secondary to digitalis effect. In addition, she has a shift in axis with a tall R wave in 3. This shift in axis to the right may just be a manifestation of her chronic pulmonary edema, although she certainly might be a candidate for recurrent pulmonary emboli.

In summary, we have a 27 year old woman with known aortic valve disease, apparently rheumatic in origin, with an aortic commissurotomy in the past. She entered the hospital after an illness of some duration, aborted temporarily by a short course of antibiotics, characterized by severe and refractory congestive failure, fever and signs of diffuse central nervous system involvement. I feel that this woman probably had a bacterial endocarditis with the infection on an abnormal aortic valve. I suspect that she developed sufficient abnormality of the valve to develop aortic insufficiency acutely. Then, as such patients so commonly do, she went on to die of her heart disease. I suspect that her cerebral disease was a meningocerebritis, probably related to recurrent emboli. Virtually every patient with bacterial endocarditis has emboli to most organ systems, commonly to the brain, very commonly to the spleen and kidneys, and in greater than 60% of the cases to the coronary arteries. Coronary artery embolizations generally are not recognized in life mainly because they are small and do not produce any great deal of clinically apparent myocardial damage. It is conceivable, however, that they may represent sufficient insult to lead to cardiac arrhythmias that may be life threatening.

The survival rate with bacterial endocarditis is not very good to begin with. The percentage of survival in a large number of patients in many series ranges from 4% to roughly 85%. Thus, in most series, 30 to 40% of the patients with bacterial endocarditis die. If one has bacterial endocarditis and develops acute aortic insufficiency and congestive heart failure, the survival rate is exceedingly low. The only survivors that

I could find were in Griffin's study in 1972 where 21% of the patients with aortic insufficiency and congestive heart failure secondary to bacterial endocarditis survived. From another study in 1967, the two patients with congestive heart failure and acute aortic insufficiency who had attempted medical treatment died. Obviously, medical treatment of A.I. secondary to bacterial endocarditis is not very successful.

The physical findings can be confusing in the presence of bacterial endocarditis with acute aortic insufficiency. This is in adults perhaps the most difficult cardiac abnormality in which to distinguish systole from diastole. The left ventricular pressure demonstrates a very high end diastolic pressure, up into the 45 to 50 range, so that by the end of diastole, the pressure in the aorta equals the pressure in the left ventricle. This means that there is diastasis during the last part of diastole and, when this occurs, the mitral valve will float closed prematurely, giving a considerably premature diastolic sound as compared to the normal 1st sound. Therefore, the normal 1st sound may be very diminished or absent and one may have a premature mitral closure sound. Also, the murmur of aortic insufficiency may not be dramatic in the presence of acute A.I., mainly because the pressure gradient may not be great and the murmur will end considerably before the end of diastole as the gradient ceases. There are occasions when, after premature valve closure, the left ventricle pressure may go on to exceed left atrial pressure, and the mitral valve may be insufficient in diastole. This may cause the murmur of diastolic mitral insufficiency, which may also confuse the issue.

There are several consequences of acute aortic insufficiency with or without bacterial endocarditis. The patient is usually asymptomatic only for a brief period of time. They suddenly become aware of a forceful heart beat and usually rapidly go into congestive heart failure while maintaining sinus rhythm. In an individual without underlying heart disease, the heart may be relatively normal in size, as the heart has not been given a chance to dilate. The peripheral findings of a wide pulse pressure should be present although the systolic pressure may be quite low and the wide pulse pressure may not be appreciated. These patients invariably have a diminished cardiac output, and a diminished aortic pressure, both mean and diastolic.



They have equalization of the LVED and aortic diastolic pressures, as previously noted. Because of the LVED increase, the left atrial and PA pressures go up. When the heart begins to expand, they may develop dilatation of the mitral annulus, with systolic mitral insufficiency, a very ominous sign. They have a mechanical disadvantage to coronary perfusion because of the low diastolic pressure and a tachycardia with a lessening filling time.

Much of this can be determined on careful physical examination, since the first sound may be soft or absent because of premature mitral valve closure, and there may be an abnormal diastolic sound. The second sound may split paradoxically because of the failing left ventricle. The systolic murmur may be present if there is increased force of ejection, or an abnormal valve such as this girl had. The diastolic murmur may be quite short because of equalization of the left ventricular and aortic pressures midway through diastole. In addition, we may have the mid-diastolic apical murmur of the classic Austin Flint variety, as well as a late diastolic apical murmur of diastolic mitral insufficiency. Recognition of the clinical findings may give a clue as to the seriousness and prognosis of aortic insufficiency. Thus, I feel that this woman had bacterial endocarditis and an abnormal aortic valve with intractable congestive heart failure and aortic insufficiency of a severity that was not clinically recognized. It is quite likely that she died a dysrhythmic death, perhaps secondary to coronary artery embolization.

DR. JONES: I see that Dr. Bates is here this morning. Perhaps he would like to comment on this case.

DR. G. WILLIAM BATES: The maternal mortality in the United States today is approximately 3/10,000 pregnancies and rheumatic heart disease accounts for approximately 80% of these deaths. It has been known for a number of years that pregnancy alters hemodynamics and imposes an additional load on the cardiovascular system. The major changes of pregnancy are an increase blood volume and an increase in cardiac output, both of which are increased by 45-50%. These changes increase gradually with advancing pregnancy and reach their maximum peak between 28-32 weeks' gestation. Beyond 32 weeks, the cardiac output decreases and approaches near normal levels at

the time of onset of labor, while the blood volume becomes essentially constant during these latter weeks. The woman with normal cardiovascular function is able to compensate for these hemodynamic changes without suffering from symptoms of cardiac failure, but the woman with cardiac pathology who is compensated in the nongravid state is at risk for developing cardiac failure during her pregnancy. Cardiac decompensation rarely occurs during the 1st and 2nd trimesters, except in these patients who are functional Class III or IV cardinals, but most frequently occurs at 28-32 weeks or in the immediate postpartum period when the blood is shunted away from the pelvic viscera.

Our patient for discussion was estimated to be approximately 12 weeks pregnant, and it seems unlikely that the pregnancy at this early stage would impose a sufficient increase in blood volume to precipitate congestive failure. The incidence of failure in patients with cardiac disease at 12 weeks gestation is 5% as opposed to 30% at 28 weeks. Certainly therapeutic abortion should have been offered to this patient as it could be anticipated that the advancing gestation would pose a threat to her life. My obstetrical colleagues who participated in this lady's care inform me that abortion was offered but was refused.

DR. JONES: Dr. Lewis, do you have any comments from the surgical point of view?

DR. JAMES LEWIS: No.

DR. JONES: I see that Dr. Ingram is here. Without prior warning I asked him if he would say a few words about the clinical impression on this case while she was on the floor.

DR. JOHN INGRAM: We felt this young lady, as Dr. Sundahl has explained, had rheumatic heart disease with aortic valvular involvement including both aortic stenosis and aortic insufficiency. Subsequently, she developed subacute bacterial endocarditis secondary to alpha streptococcus, as mentioned. We felt that the other clinical entities that occurred were complications of her heart disease. These included severe congestive failure and subsequent pulmonary edema. The superimposed bacterial endocarditis precipitated what we thought were multiple septic emboli to the brain, with subsequent formation of mycotic aneurysms or small brain abscesses which contributed to her mental confusion. We also felt that she was most likely embolizing to several other places, including the



spleen and kidneys, although we were never certain. She initially did very well under the treatment regimen that was started which included penicillin, Lanoxin and diuretics. One of the main things we were concerned about was the pregnancy. We discussed in great detail with the OB-GYN department the role of the pregnancy in this young girl's prognosis. They felt strongly that we should continue the present course of treatment and not interrupt the pregnancy; however, as already mentioned, the demand on the heart starts increasing after 16 weeks. At that time I felt the pregnancy had a lot to do with our inability to control the congestive heart failure in the end. We could keep her chest sounding fairly clear, yet we were always treading the fine line between compensation and failure, as her chest films indicate. This was a tedious balance and at about 20 weeks into her pregnancy she died. I felt that most likely the cause of death was an arrhythmia, possibly secondary to coronary embolism. Also, she may have been throwing multiple pulmonary emboli. We thought at post mortem examination we would find signs of subacute bacterial endocarditis on the aortic valve and possibly an abscess in the brain with multiple infarctions of the organ systems, including the spleen and the kidney.

DR. ROBERT HORNSBY: I want to know if an earlier subclavian catheter had clotted off?

DR. INGRAM: No, she never had one. We attempted to start a subclavian catheter on the day of her demise in order to give her intravenous penicillin. She had been delirious and confused throughout her hospital course and was constantly pulling her IV's out. Thus she had no IV sites remaining. Also, since she was becoming more critical we desired to monitor her central venous pressure which is easily done with the subclavian catheter.

DR. JOSEPH ACKER: I gather the general consensus was that this was rheumatic valvular disease and that she had rheumatic aortic stenosis as a result of her age 6 rheumatic fever. Is that correct?

DR. INGRAM: Yes.

DR. ACKER: Was congenital aortic stenosis considered or did you have definite evidence that this was not congenital?

DR. INGRAM: We did not have any additional evidence that this was not congenital aortic stenosis except the surgeon's description

some years before. The patient and her family were unable to add any additional history in that they were very unreliable. So we considered the possibility of a congenital aortic stenosis with superimposed SBE.

DR. SUNDAHL: The surgeon's description of the valve is that of a rheumatic lesion, at least it sounded to me like a rheumatic valvulitis.

DR. ACKER: Where was this done?

DR. JONES: She was operated on here at this hospital. The surgical people who saw her did have one or two comments in the chart suggesting their preference for congenital aortic stenosis.

DR. ACKER: The point to be brought up would be that it would be most unusual for a girl, age 27, to have pure rheumatic aortic stenosis of this severity and this is why one should immediately think of the congenital lesion. Is it documented as endocarditis?

DR. SUNDAHL: I don't think so.

DR. ACKER: I think it might be possible that pure aortic stenosis is not nearly as common in rheumatic fever as it was once thought to be. Congenital aortic stenosis probably would help explain the more acute course after the development of aortic insufficiency. The heart with pure aortic stenosis would not have made the physiological adjustments to aortic insufficiency as well as those with rheumatic aortic stenosis and a more dynamically significant aortic insufficiency.

DR. JONES: The autopsy was performed by Dr. J. H. Embry. There was considerable evidence of congestive heart failure. The liver weighed 1930 grams and showed well developed passive congestion. There was bilateral hydrothorax with 800 cc. of fluid in the right pleural cavity and 150 cc. in the left. The lungs were edematous and congested. Ankle edema was 3+ at autopsy.

Infarcts were present in the spleen, the left kidney, and the left occipital lobe of the brain, which showed a small cortical infarct. There were also focal embolic glomerular lesions in small numbers. Even more prominent was the presence of several emboli embedded in small myocardial vessels of the left ventricular myocardium. An infiltrate of neutrophils was present near these lesions.

The heart, which weighed 620 gm., was the focus of attention in this autopsy. There was an extensive involvement of the aortic valve



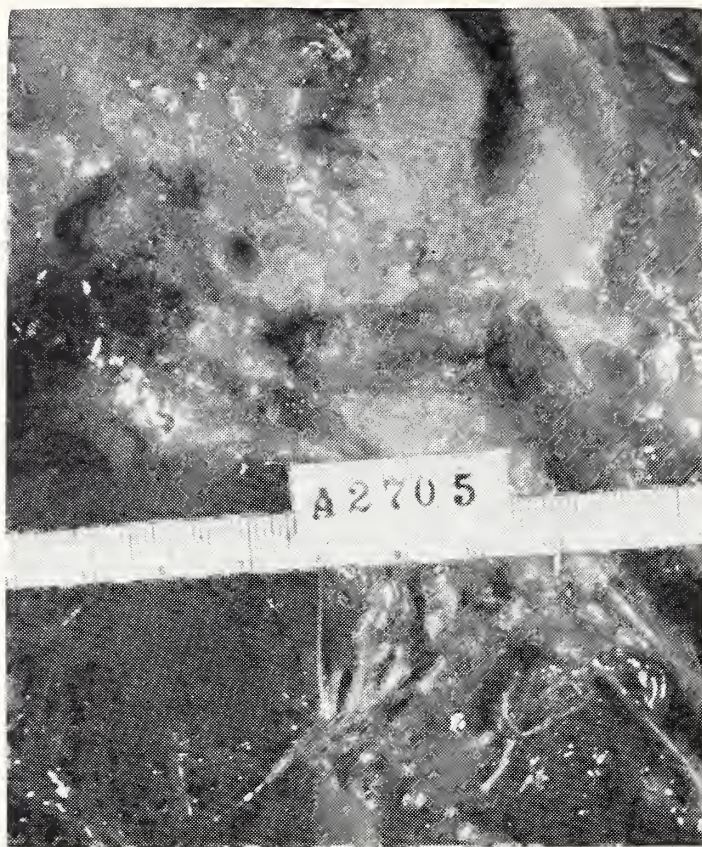


Fig. 1

cusps by an infectious, vegetative endocarditis, with additional involvement of chordae subtending the aortic leaflet of the mitral valve. The right coronary cusp showed a large defect with jet stream thickening of the aorta above this cusp. In the photograph of the aortic valve (Fig. 1), one can see that the aortic valve cusps are severely deformed, particularly the right coronary cusp. Also, it is my feeling that the chordae tendineae of the mitral valve are slightly thickened. Otherwise the mitral valve was normal.

The myocardium showed multiple foci of loss of myocardial fibers. These are lesions frequently seen in aortic valvular disease with myocardial hypertrophy, and are probably due to ischemia. No Aschoff bodies were present.

Although I cannot be certain of the etiology of the aortic valve lesion, I would be inclined to favor the idea that the lesion was rheumatic in origin. The mild changes in the mitral valve lend support to this opinion.

#### Final Anatomic Diagnoses:

Valvulitis, chronic, involving aortic valve (severe) and mitral valve (mild), probably of rheumatic origin.

Wound of operation, aortotomy with repair of aortic valvular stenosis (7 years). Pregnancy (16 weeks' gestation, estimated).

Subacute endocarditis, involving aortic valve (severe) and mitral valve, due to alpha hemolytic streptococcus, with aortic incompetence due to valve destruction.

Splenic, renal, and cerebral infarcts.

Focal embolic glomerulitis.

Myocarditis, focal, septic.

Congestive heart failure, with hydrothorax, bilateral, Passive congestion of liver, and Myocardial necrosis, focal.

DR. JONES: Now would you like to comment further, Dr. Sundahl?

DR. SUNDAHL: First of all, I suspect that the early pregnancy did not contribute significantly to the problem, for the fluid overload secondary to the pregnancy is not terribly great early in the game. Secondly, the question I have is, "Why are there still bacteria present in the vegetations after three weeks of intensive therapy?" This brings up the previously mentioned point about the efficacy of therapy for bacterial endocarditis, making certain that one has an adequate blood level of antibiotic to penetrate the vegetations by determining the serum bacteriocidal level for the organism involved.

The third point is one that I alluded to earlier. There is substantial clinical experience with surgical treatment of infected valves, particularly aortic valves in which bacterial endocarditis has produced the hemodynamic catastrophe of acute aortic insufficiency. Surgical results demonstrate a reasonable prognosis even when the surgery is performed before the valve is perfectly sterilized. Post operative infection has not been a major problem. Surgery is recommended in the syndrome of bacterial endocarditis with aortic insufficiency (1) if there is congestive heart failure, (2) when there is more than one clinically apparent embolus or (3) when there is no drug for the bug. The recommended approach in the treatment of the patient who presents with aortic insufficiency and suspected bacterial endocarditis should be, first, make the diagnosis. In the absence of congestive heart failure, medical therapy alone is sufficient. If the patient has mild congestive failure, he should be monitored continuously and have his aortic valve replaced if congestive heart failure increases, or embolization or arrhythmia occur. If, at the outset, congestive heart failure is severe, these patients should be operated upon immediately.



# TMA **EKG** of the month

## HISTORY

This 54-year-old gentleman was admitted for evaluation of recurrent chest pain of one year's duration. Although the character of the pain was compatible

with angina pectoris, a definite relationship to exertion was not apparent and numerous "severe episodes" had occurred at rest. No prolonged clinical event had occurred to suggest an acute myocardial infarction, and he had noted neither palpitations nor unusual dyspnea on exertion. Cardiovascular examination was unremarkable except for a faint fourth heart sound. His blood pressure was normal and there was no previous history of hypertension. His resting electrocardiogram is illustrated in Fig. 1.

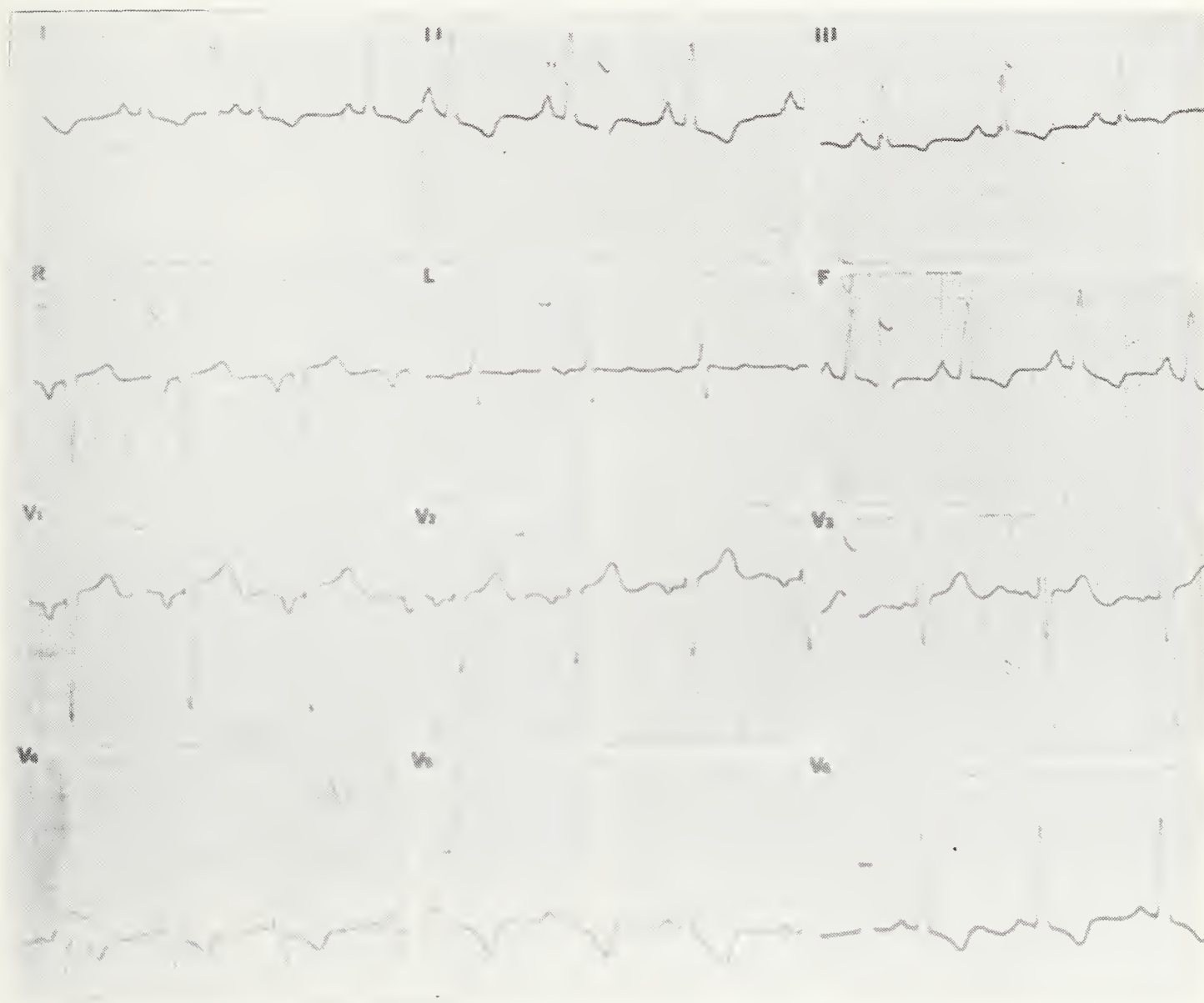


FIG. 1

## DISCUSSION

Cardiac rhythm and rate are normal. Although the P waves are not unusually broad, the markedly posterior orientation with a deeply negative contour in  $V_1$  suggests left atrial enlargement. QRS voltage in the precordial leads is compatible with left ventricular enlargement and the contour of ST segment depression with T wave inversion is typically described as "strain," a somewhat nebulous concept

usually associated with such clinical problems as valvular aortic stenosis, coarctation of the aorta and severe systemic hypertension. It is not possible to diagnose a previous myocardial infarction from the electrocardiogram, and thus the finding of severe left ventricular dysfunction with an abnormally elevated left ventricular filling pressure of 22 mm Hg secondary to diffuse obstructive coronary artery disease came somewhat as a surprise at the time of left heart catheterization with selective coronary cineangiography. Right anterior oblique views

From the Department of Cardiology, St. Thomas Hospital, Nashville, Tenn. 37203.



of the left ventriculogram in diastole and systole are illustrated in Fig. 2 and 3 document markedly diminished contractility and decreased ejection fraction. Coronary artery lesions included 100% proximal obstruction right coronary artery, 100% obstruction obtuse marginal branch of circumflex and 90% proximal obstruction anterior descending.

Severe left ventricular dysfunction secondary to obstructive coronary artery disease is usually preceded by overt episodes of acute myocardial infarction and evidence of transmural infarction is usually evident on the electrocardiogram. In the absence of systemic hypertension or left ventricular outflow obstruction, electrocardi-

ographic evidence of left ventricular enlargement is uncommon in ischemic heart disease. This electrocardiogram is presented therefore as an unusual manifestation of a common and extremely variable clinical problem, obstructive coronary artery disease.

Final EKG diagnosis: (1) Left atrial enlargement. (2) Left ventricular enlargement with ST-T changes.

Final anatomic diagnosis: Diffuse obstructive coronary artery disease with severe secondary left ventricular dysfunction.

Harry L. Page, Jr., M.D.  
W. Barton Campbell, M.D.  
Co-Directors



FIG. 2



FIG. 3

**FAMILY PHYSICIANS, INTERNISTS, GENERAL PRACTITIONERS, ORTHOPEDIC SURGEONS, and OB-GYN** needed for various communities throughout Tennessee. All opportunities are located in towns with a modern, fully-equipped, JCAH approved hospital. **Contact: E. J. Ryan, Jr.,** Director-Medical Relations, Hospital Corporation of America, P.O. Box 550, Nashville, Tennessee 37203.

## **WANTED**

### **AVIATION MEDICAL OFFICER MEMPHIS, TENNESSEE**

Career civil service position available for physician interested in aviation medicine career with the Federal Aviation Administration. Apply: Dr. Harry W. Faulkner, Regional Flight Surgeon, FAA, P. O. Box 20636, Atlanta, Ga., 30320. Telephone: 404/526-7251. The FAA is an equal opportunity employer.



## Proteinuria (I)

Normal urine has been found to contain as many as 23 or more of the protein constituents of normal plasma, as well as several proteins not found in normal plasma. Although most normal adults excrete 100-150 mg of urinary protein per day, in practice the value of 250 mg/24 hr is generally accepted as the approximate upper limit of normal, corresponding to about 5-25 mg%. Proportionately, relative to the globulin components, albumin is present in lesser quantity in urine (5-30%) than in serum (50-60%). However, while albumin in urine and serum are apparently identical molecules, many of the urine globulins which comprise from two-thirds to three-fourths of all urine protein, are either not present in plasma (e.g., the Tamm-Horsfall glycoprotein, which is the major protein constituent of urinary casts), or are considerably different from the bulk of serum globulins. For example, protein molecules with a molecular weight exceeding 90,000 are found in normal urine only in very small quantities or not at all; such proteins as the immunoglobulins (IgA, IgM, IgG, IgD),  $\alpha_2$ -macroglobulin,  $\beta$ -lipoprotein, and fibrinogen are included in this category. Interestingly, IgE and "secretory" IgA, both of high molecular weight, are normally present; this may be due to local production in the urinary tract itself. Contrariwise "microproteins" migrating electrophoretically with the globulin fractions constitute a relatively large proportion of urine proteins, but are present only in trace quantities in normal plasma. This category includes such proteins as  $\alpha$ ,  $\beta$ , and  $\gamma$ -migrating "microglobulins" and immunoglobulin light chain monomers, all of which have molecular weights of 40,000 or less. Examples of other proteins found in normal urine are prealbumin, fibrinogen breakdown products, transferrin, ceruloplasmin, haptoglobins, and various glycoproteins.

Of the various methods used for clinical determination of urinary protein volumes,

virtually all are only semi-quantitative. Exact quantitative methods such as the biuret method or Kjeldahl total nitrogen method are impractical. The most common and simplest method in widespread use today is the "dipstick" method, which depends upon the color change of an indicator dye in the paper stick due to the presence of protein in the urine. By this method proteinuria of 15-25 mg% or greater will be detected; thus a "trace" value may actually represent a degree of proteinuria within the normal range. A "one-plus" reaction is considered suspicious for pathological proteinuria, and warrants further evaluation. Any degree of proteinuria detected by the qualitative screening methods can be better evaluated by quantitation of a 24-hour specimen. While the dipstick technique avoids the false positive results of the heat and/or acid turbidometric methods due to specimen turbidity or the presence of radiographic contrast media, tolbutamide metabolites, and some antibiotics, because it is much more sensitive to albumin than to globulin it may fail to detect the pathological globulinuria seen in myeloma and related disorders. Of course, the sensitivity of any of the currently employed methods will decrease as urine flow increases and the urine becomes more dilute.

"Minimal" proteinuria (less than 0.5 gm/day) may accompany certain forms of renal disease such as chronic pyelonephritis, tubular disorders, and polycystic disease. "Heavy" proteinuria (greater than 4 gm/day) generally indicates glomerular disease, as does proteinuria of "moderate" degree (0.5-4.0 gm/day). Intermittent proteinuria may be "benign" or may reflect significant renal disease; continuous proteinuria generally indicates a pathological state rather than a physiological, functional, or postural condition. Significant renal disease may also exist without proteinuria, such as pyelonephritis, obstructive nephropathy, renal neoplasm, and congenital malformation, and heavy proteinuria may originate in such non-renal disorders as renal vein thrombosis and constrictive pericarditis.

From the Department of Pathology, Methodist Hospital, Memphis, Tenn. 38104.

Dean G. Taylor, M.D.



# TMA X-ray of the month

A 32-year-old black female, was admitted to the hospital because of chills, fever, bilateral flank pain radiating to the anterior abdominal wall. KUB and IVP films are shown in Figures 1 and 2.

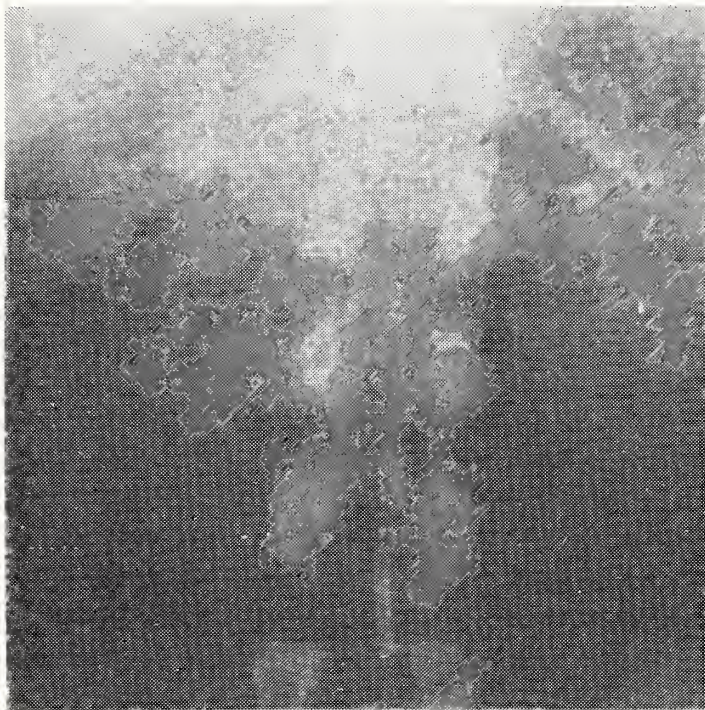


FIG. 1



FIG. 2

## Radiographic Findings:

The KUB film (Fig. 1) shows several calcifications localized in the lower pole of the right kidney and upper pole of the left kidney. Some of the calcific densities appear to have radiolucent centers. The right kidney measures 14 cm. in length and has a smooth outline. The left kidney measures 10 cm. in length and shows a lobulated, irregular border. Following injection of 50 cc. of Renografin-76, visualization was so poor that a drip pyelogram was performed. (Fig. 2) Marked clubbing of the calyces are noted throughout both kidneys. There is a marked cortical loss in the left kidney. The left ureter was only faintly visualized in its upper portion. Several "ring shadows" representing radiolucent halos rimming dilated calyces are noted in the areas of the calcifications in the right lower pole and left upper pole. There is mild dilatation of the right ureter, probably secondary to extrinsic compression at the pelvic rim. The right renal pelvis is not dilated. During this admission, the patient developed severe colicky right flank pain. A retrograde pyelogram on the right (Fig. 3) showed a lucent oval filling

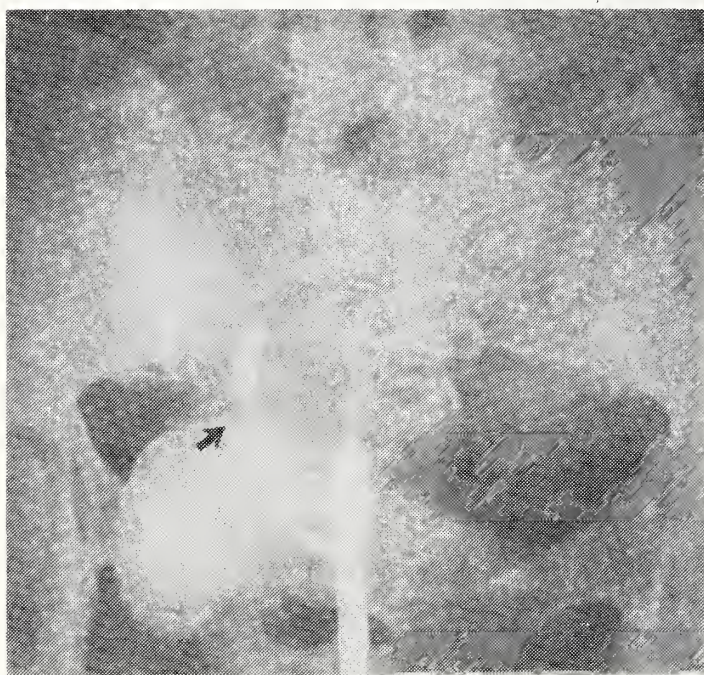


FIG. 3

defect in the distal right ureter. The left retrograde pyelogram showed no obstructive lesions.

The differential diagnostic considerations are:

1. Bilateral papillary necrosis with a sloughed papilla obstructing the right distal ureter and atrophic pyelonephritis of the left kidney.
2. Renal calculi with chronic pyelonephritis

From the Department of Radiology, Vanderbilt University Hospital, Nashville, Tenn. 37232.



of the left kidney and hydronephrosis of the right kidney.

3. Renal tuberculosis.
4. Papillary tumor of the pelvis, with blood clots.

#### *Clinical History:*

The patient had a history of recurrent pyelonephritis. Urinalysis on several occasions showed pyuria and bacteruria. Urine cultures grew out *Proteus* and *Enterobacter*. The urine showed a persistently low specific gravity. Sugar and protein were negative. Hemoglobin electrophoresis showed S and A, indicating sickle cell trait. The patient was not a diabetic and denied excessive analgesic intake. The patient subsequently underwent right ureteral lithotomy and a sloughed papilla was removed from the distal right ureter.

#### *Final Diagnosis:*

Renal papillary necrosis.  
Sloughed papilla obstructing distal right ureter.  
Sickle cell trait (SA).

#### *Discussion:*

Papillary necrosis can occur in<sup>1,2,3,5,6,7,8,10</sup> diabetes mellitus; sickle cell hemoglobinopathy—SS, SA, SC; analgesic nephropathy—phenacetin, aspirin; renal vein thrombosis; pyelonephritis; specific renal infections—TB, brucellosis, and actinomycosis; obstructive uropathy; transplanted kidney; and radiation.<sup>9</sup>

The following conditions may simulate early papillary necrosis radiographically: pyelorenal backflow; calyceal diverticulum, pyelogenic cysts; renal tuberculosis; chronic pyelonephritis; medullary sponge kidney; renal dysplasia;<sup>4</sup> neoplasms; stones, and blood clots.

#### *Pathogenesis:*

The direct cause of papillary necrosis, regardless of underlying etiology, appears to be a vascular phenomenon resulting in a coagulative necrosis.<sup>6</sup> The predilection for the medulla has been attributed to sluggish blood flow in the vasa recta, leading to stasis and decreased oxygen tension, along with increased osmolarity progressing from the base of the pyramid to the apex of the papilla. The combined effects of increased osmolarity and decreased oxygen tension in the medulla facilitate sickling and ischemic necrosis. The case presented had three conditions predisposing to renal papillary necrosis: Chronic pyelonephritis, obstructive uropathy, and sickle cell trait. The incidence

of papillary necrosis has been reported as being more frequent in SA, and SC than in SS.

Clinical manifestations may include chills, fever, renal colic, hematuria, persistent hypos-thenuria, acute or chronic renal failure.

#### *Radiographic findings of renal papillary necrosis:*

##### *Plain film findings:*

1. Punctate calcifications in region of papilla.
2. Calcified papillae, in situ or sloughed.

##### *Pyelographic findings:*

1. Poor function and poor concentration. Double dose or drip infusion IVP with abdominal compression is often needed for better visualization.
2. Erosion of tip of papilla and/or fornices giving a moth-eaten appearance.
3. Cavity formation in the papilla or following slough of papilla, extension of contrast into renal cortex.
4. "Ring shadows" or "arc sign," with contrast completely or partially surrounding the necrotic papilla in situ.
5. Caliectasis at single or multiple sites.

Two forms of renal papillary necrosis have been recognized. They are: 1. Papillary type characterized by destruction of the fornices, with the formation of arcs and rings, and cavity formation after sequestration of the papilla. 2. Medullary type characterized by destruction of the tip of the papilla only, either with communication with the calix or formation of a small cavity at the tip of the papilla. Normally, the renal outlines are preserved without scarring or diminution of the renal size. However, frequent association with pyelonephritis and obstructive uropathy from sloughed papilla or blood clots may lead to secondary changes of atrophic pyelonephritis or hydronephrosis.

Ying T. Lee, M.D.  
Janet K. Hutcheson, M.D.

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## from the tennessee department of public health

### Occupational Health in Tennessee

**Robert H. Wolle, Director**  
**Division of Occupational and Radiological Health**

In December, 1970, the Congress of the United States passed the Federal Occupational Safety and Health Act, an act which will have a dramatic effect on the responsibilities of industry and business for health and safety. In passing the legislation Congress declared as its purpose "to assure so far as possible, every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources." Although the Federal Act apparently preempts State responsibility for occupational safety and health, it has provisions whereby responsibility can be delegated to the States providing certain criteria are met and the State submits an acceptable plan to the Secretary of Labor. The Governor of Tennessee has designated the Department of Labor and the Department of Public Health as dual designees for the State's response to this legislation.

In its 1972 session, the Tennessee General Assembly responded to this challenge and enacted the Tennessee Occupational Safety and Health Act, which authorizes the Commissioners of Labor and Public Health to establish and maintain safety and health programs in their respective organizations, to adopt safety and health standards and procedures for enforcing such standards, to establish procedures for reporting occupational accidents and diseases, and encourages joint labor-management

efforts to reduce injuries and diseases arising out of employment. In addition it establishes an Occupational Safety and Health Review Commission to assist in the adjudication procedure. The Act is applicable to all places of employment, except Federal agencies and establishments which are covered by other Federal Acts, such as coal and metal mines. The Act requires all State agencies and municipal and local governments to establish safety and health programs, except that local and municipal governments may elect to be treated as private employers.

The State has submitted a Plan to the Secretary of Labor which details a modus operandi for the enforcement of the Tennessee Act. Under this Plan the Department of Public Health, through the Division of Occupational and Radiological Health, will administer the health aspects of the Act.

The Tennessee Department of Public Health has since 1945 carried out an industrial hygiene program directed toward the control of occupational disease hazards concentrated primarily in the manufacturing sector of employment. This program which had legal enforcement authority was primarily one of preventive engineering. It provided a nucleus of trained professionals who have been assigned responsibility for the new Act.

According to the 1972 Act the Commissioner of Public Health has broad powers to require environmental monitoring of work places and biologic monitoring of workers exposed to hazards in a biologically significant manner.



Where appropriate the Commissioner may prescribe the type and frequency of medical examinations or other tests which shall be made available by employers to determine whether the health of the worker is being adversely affected by the exposure.

### INVOLVEMENT OF THE MEDICAL PROFESSION

Although the purpose of the Act is to minimize environmental exposure to toxic agents and physical hazards, the full potential for prevention will not be realized until physicians are involved in the program. Epidemiologic studies are demonstrating that much of the occupational morbidity and mortality is due to diseases which closely resemble, in their clinical aspects, those incurred by the general population, such as cancer, diseases of the cardiovascular and respiratory systems, psychiatric disturbances, and stress patterns. However, the occurrence of occupational diseases will no longer be the sole criterion by which society will determine the need for an industrial hygiene and preventive medical activity. Worker dignity is rapidly becoming an overriding consideration. Even though adverse health effects cannot be demonstrated, workers are demanding, with public and legislative support, work sites which are aesthetic, not demeaning to human dignity, and free of potential health hazards.

As the program develops the medical profession will doubtlessly be called upon, to a greater extent, by industrial management to assist and advise on disease relationships and preventive programs. The Act also requires the employer to exercise greater responsibility in the reporting of occupational accidents and diseases and in securing emergency medical treatment for affected workers. The reporting procedures of the Act in no way disturbs the traditional patient-physician relationship, as reporting is a responsibility of the employer. However, the physician does have a greater moral responsibility to inform his patient of possible occupational relationships. The Department of Public Health will respect the confidentiality of information voluntarily offered by the physicians relating to suspected occupational diseases or adverse working conditions which might affect the health of workers. The Department of Public Health has enjoyed an excellent cooperative relationship with the

medical profession in the control of occupational health hazards and it views the Tennessee Act as a mechanism for improving and strengthening this relationship.

### THE STATE PROGRAM IN OCCUPATIONAL HEALTH

The program which is planned at this time by the Department of Public Health is largely environmentally oriented, consisting of inspections and determination of compliance with standards. The program will operate through four regional offices located in Memphis, Nashville, Chattanooga, and Knoxville with its headquarters in the Department of Public Health, Nashville.

The Staff will consist largely of industrial hygiene engineers, chemists, and others trained in the environmental aspects of industrial disease control. Through cooperative activities with medical schools and health care institutions throughout the State, the program will work toward the enhancement of the medical aspects of the program. Although emphasis will be placed on compliance, the program will attempt to obtain voluntary corrective action on the part of industry through a consultation activity section within the Division and a cooperative relationship with the Environmental Engineering Project of the University of Tennessee.

To assist the employer in meeting the requirements of the Act, the Division of Occupational and Radiological Health, in cooperation with the Environmental Engineering Project, plans a series of training courses during the summer and fall of 1973. These courses will emphasize technical training related to the chemical and physical hazards most frequently encountered in industry. Tentative plans include one course on occupational lung diseases for physicians having an interest in this subject. Lung Diseases was selected as the first presentation in the medical area since this is probably the most serious occupational disease encountered in Tennessee industry. The course would focus on silicosis, byssinosis, asbestosis, and lung cancer. Other courses relating to occupational diseases will be presented if an interest on the part of the medical profession is reflected. All training relating to clinical and medical aspects of occupational diseases will be presented in cooperation with a medical training institution.





## self-evaluation quiz

### THE COOPER QUIZ\*

(Answers found beginning on page 674)

**Answer true or false unless otherwise indicated**

1. In a study of streptococcal pharyngitis in children treated by penicillin it was noted that if parental counseling was done (concerning the importance of the medication) oral penicillin was as efficacious as intramuscular injection.
2. Simultaneous liver and spleen scanning is a practical way to study a patient suffering abdominal trauma. It can detect lesions as small as 1 or 2 cm.
3. Nutritional anemia demonstrates a high prevalence of iron deficiency. It is much more common in infants than in two or three year olds.
4. Fluoride-treated water supplies can produce systemic fluorosis in patients with renal insufficiency.
5. Lung cancer risk regardless of the histologic type, is increased with the daily cigarette consumption.
6. The Public Health Service has advised the desirability of rubella vaccine in adolescent girls and adult women who show a susceptibility to rubella by serologic testing. The complication of arthritic joint reaction increases in frequency and severity with advancing age.
7. Some cardiologists feel that patients with LBBB should receive prophylactic antiarrhythmic therapy at the slightest indication of ventricular irritability. However, there is no reason to continue this therapy after lack of evidence of ventricular irritability.
8. In systemic lupus skin biopsy is as accurate as renal biopsy in detecting those cases with a poor renal prognosis.
9. Carcinoembryonic antigen (CEA) may become positive in patients with flareups of ulcerative colitis and does not (under these circumstances) indicate the presence of colonic cancer.
10. Lanoxin (digoxin) is (for all practical purposes) completely absorbed when taken by mouth in both the solid (pill) or liquid form.
11. Only one organ is capable of producing 1,25-dihydroxycholecalciferol (the most active form of Vitamin D). It is (a) liver (b) bone (c) spleen (d) skin (e) kidney.
12. Patients with uremia (with faulty calcium metabolism) will respond to Vitamin D, but not to calciferol.
13. Exertional disintegration of muscle can be fatal by producing kidney failure and hyperkalemia.
14. Pediatricians (in particular) are very interested in total parenteral nutrition. Now synthetic aminoacids are used in some of these solutions. There is a danger that the administration of such solutions might produce acidosis and thereby inhibit growth.

\*Published monthly by the Dept. of Medical Education, the Cooper Hospital, Camden, N.J., William T. Snagg, M.D., Director, (deceased).



15. Cyanosis in infants may be due to heart or lung disease. Measurement of acid-base and  $P_{ao_2}$  on oxygen with and without positive end-expiratory pressure should allow the clinician to separate lung and heart causes of cyanosis without resorting to cardiac catheterization.
16. Females with infectious vaginal gonorrhea cannot get gonorrheal proctitis except by having rectal intercourse with an infected male.
17. With surgical injury, one of the physiologic changes in hemostasis is the direct relationship between platelet and fibrinogen consumption.
18. The potassium-preserving oral diuretics (spironolactone and triamterene) do not have an antihypertensive action like the other diuretics.
19. Renal function may be evaluated by single-injection technics by measuring the disappearance of the drug from the plasma. Such a study is easily adapted to infants and others where the collection of urine is a problem. These results are as accurate as when the urine (instead of the plasma) is measured.
20. In a study by NIH of patients with Hodgkin's disease, there was a significant risk of development of secondary malignant tumors, particularly in those patients receiving both intensive radiotherapy and intensive chemotherapy.
21. Among the differential diagnosis of conditions associated with polyarthritis primary histoplasmosis should be considered.
22. Carbon monoxide exposure has been implicated in the pathogenesis of arteriosclerosis.
23. A normal ECG in male survivors of myocardial infarction is not a prognostic indicator.
24. ECG findings in infarct patients provide useful prognostic information independent of clinical status.
25. An ST-segment depression in the resting ECG is not as strong a risk predictor as cardiac enlargement.
26. An NIH study done in 1965 demonstrated a 50% risk factor for hepatitis in multiply transfused patients who received primarily commercial blood. A later study showed the risk of patients receiving at least one unit of HBsAg blood to be considerably less than those receiving commercial blood.
27. In this same NIH study, the simultaneous exclusion of commercial blood and HBsAg-positive donor blood resulted in a 7.1% hepatitis rate.
28. Infection is the major cause of morbidity and mortality in patients with acute nonlymphocytic leukemia.
29. Most infections in patients with acute nonlymphocytic leukemia come from the patient's own resident flora, but in about half of these, the infecting organism was hospital acquired.
30. In granulocytopenic patients infections are very easy to recognize.
31. Diphtheria in the U.S. appears to be on the increase. The best treatment is antitoxin. Commercial human serum preparations were tested for diphtheria antitoxin. All of them appear to have sufficient antitoxin to be of therapeutic value.
32. One of the more heroic measures for the control of dangerous obesity is a surgical small bowel procedure. Two of its complications are nonspecific polyarthritis and fatty degeneration of the liver.



# If the AMA didn't speak for the profession, who would?

Who would speak for our profession on the more than 2,500 medical and health bills submitted to Congress every session?

Who would state our views on national health insurance? HMO's? Peer review? Maternal and Child Care programs? Health manpower? Emergency medical services? Regulations on federal health programs?

Who would provide the scientific input and the practitioner's experience and knowledge so essential to legislation on drug abuse, cancer, heart disease, communicable diseases?

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It does so to retain the basic principles of private practice in any government health program that might be enacted and, equally important, to promote legislation for more and better health care for the public.

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**We can do much more together.**

American Medical Association  
535 N. Dearborn St./Chicago, Ill. 60610





**from the  
executive  
director**

**J. E. BALLENTINE**

# **MEDICAL DIGEST**

**NEWS OF INTEREST TO DOCTORS IN TENNESSEE**

## **TMA SUCCESSFUL IN STOPPING RATE INCREASE IN LIABILITY AND MALPRACTICE INSURANCE . . .**

In March, 1973 TMA was notified by the State Department of Insurance that a filing for a 100% increase in rates was made by the Insurance Service Office (ISO) on behalf of its member and subscriber companies. The filing was concerned with rate revisions applying to physicians and surgeons . . . Your TMA Committee on Group Insurance worked feverishly to accumulate data and prepare its case to defeat this totally excessive increase in rates . . . The hearing was held at the State's Insurance Department on May 17, to allow interested parties an opportunity to present evidence either in support or in opposition to the proposed rate revision . . . Since 75% of the physicians in Tennessee participate in the TMA group plan on malpractice insurance, our experience rating is such that a 100% increase in rates was totally out of order. The five year experience of the TMA plan of premiums paid were well below the rate increase of 25% granted at the end of 1972. TMA representatives submitted that Tennessee's experience, and not nationwide experience, should govern the pricing of the rates. National rates and experience do, however, play a part in the rate structure. TMA submitted that malpractice insurance premiums and direct overhead expenses of physicians when raised are passed on to patients, thereby increasing the cost of medical care. It was stated that TMA has exerted efforts to hold down the frequency of malpractice claims by education of physicians and enforcement of physicians' ethics. A considerable amount of statistical material was submitted as evidence that the increase was unnecessary. It was also stated that the request for a 100% increase would directly affect health costs, contrary to Phase II and Phase III of the Price Commission.

The decision was that Mr. Halbert Carter, Commissioner of Insurance, on May 22, 1973 issued Order No. 73-336 denying the ISO increase, and found that the filing did not meet requirements of Tennessee insurance laws, and he disapproved the request. . . This action was a real victory for medicine in Tennessee, and it behooves physician members to give serious consideration of participating in the TMA's liability and malpractice insurance plan, if they are not already doing so.

\* \* \*

**PSRO CONFERENCE . . .** TMA's President, President-Elect, Chairman of the Board of Trustees, and the Executive Director met with the Deputy Director of the Professional Standards Review Organization, which is under the Health, Education and Welfare Department. The meeting was held in Washington on June 5. Dr. Bauer, Director of PSRO, was unable to attend due to an emergency within the Department of HEW. The purpose of the meeting was to impress upon the PSRO Director that the application and recommendations submitted by the Tennessee Foundation for



Medical Care, Inc., was the most feasible, economical and workable plan for Tennessee. Also, TMA's representatives pressed for startup funds to get underway with the organization of such a program in Tennessee. Very little information was obtained that was not already known. There still is some question as to whether HEW is going to allow the state-wide, coordinated "umbrella-type" plan as proposed by TMA . . . It was learned that the PSRO office would soon be submitting several PSRO district types of arrangement for areas within the state, such plans coming from the regional offices of HEW. TMA representatives were told that medical organizations would be given an opportunity to comment and recommend on the geographical areas. Definitive answers to many questions still are not available.

\* \* \*

**INFORMATION PROGRAM ON PSRO . . .** Resolution No. 9-73, adopted by the House of Delegates of TMA last April, urged every county medical society to designate a specific council or committee to receive informational materials and guidelines relating to the duties and functions of PSRO's. Much is yet to be learned but physicians are urged to take the time to become knowledgeable of PSRO's as Professional Standards Review Organizations are going to be perhaps the most important issue that has affected practicing physicians in the United States . . . Resolution No. 9-73 urged every county medical society to designate an officer, committee chairman or some particular physician to whom TMA could forward informational material, so that this key physician could interpret and keep informed members of each respective county medical society. Only a few societies have submitted persons to whom we can send the material. TMA is ready to assist county societies with information on this important subject. Physician members are urged to take time to become knowledgeable of this extensive law.

\* \* \*

**DISCLOSURE OF MEDICARE RECORDS AND REPORTS . . .** Medicare investigative reports completed after January 31 will be made public, the Social Security Administration has announced. They include reports on deficiencies in institutions, home health agencies and independent laboratories, as well as evaluations of carriers, intermediaries, state agencies and providers. The names of physicians found to have furnished excessive services will be released only "after consultation with a professional medical association" or a state medical authority and after the physician has had an opportunity to offer evidence. These points on physicians were not contained in the regulation when it was proposed last September. They apparently were added in response to criticism from the AMA and others.

\* \* \*

**WATCH OUT FOR WANT ADS THAT SHOW AGE DISCRIMINATION . . .** In placing help wanted advertisements, doctors should be careful that the wording of the ads to not indicate that they prefer a younger person or an older one. The Age Discrimination in Employment Act was enacted to prevent such discrimination against older workers. Employers of 25 or more persons who repeatedly violate the provision of this law are in danger of being investigated by the U.S. Labor Department . . . Among the terms that must be avoided in help wanted ads are "recent graduate," "junior secretary," "student," "age 25-35," "maximum 2-5 years experience," "youthful," etc.



public  
service



## COMMUNICATIONS • LEGISLATION

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**TENNESSEE'S NEW ABORTION LAW . . .** The Tennessee General Assembly rejected abortion legislation recommended by the Tennessee Medical Association and instead adopted the following law which is now in effect:

SECTION 1. Tennessee Code Annotated, Section 39-301, is amended by deleting the present language of that section in its entirety and substituting in lieu thereof the following:

a. For the purpose of this section "abortion" is defined as the administration to any woman pregnant with child, whether such child be quick or not, of any medicine, drug, or substance whatever, or the use or employment of any instrument, or other means whatever, with the intent to destroy such child, thereby destroying such child before its birth.

b. For the purpose of this section "attempt to procure a miscarriage" means the administration of any substance with the intention to procure the miscarriage of a woman or the use or employment of any instrument or other means with such intent.

c. Every person who performs an abortion is guilty of the crime of criminal abortion and shall be punished by imprisonment in the penitentiary for not less than one (1) nor more than five (5) years unless such abortion is performed in compliance with the requirements of subsection e.

d. Every person who attempts to procure a miscarriage shall be guilty of the crime of attempt to procure criminal miscarriage and shall be punished by imprisonment in the penitentiary for not less than one (1) nor more than three (3) years unless such attempt to procure a miscarriage is performed in compliance with the requirements of subsection 2. Every person who compels, coerces, or exercises duress in any form with regard to any other person in order to obtain or procure an abortion on any female shall be guilty of a misdemeanor and upon being found guilty of such offense shall be punished by a fine of not less than five hundred dollars (\$500.00) nor more than one thousand dollars (\$1,000.00) or imprisoned for not less than ten (10) days nor more than eleven (11) months and twenty-nine (29) days or both in the discretion of the trial judge.

e. No person shall be guilty of a criminal abortion or an attempt to procure criminal miscarriage when an abortion or an attempt to procure a miscarriage is performed under the following circumstances.

1. During the first three (3) months of pregnancy, if the abortion or attempt to procure a miscarriage is performed with the pregnant woman's consent and pursuant to the medical judgment of the pregnant woman's attending physician who is licensed or certified under Title 63, Chapter 6 or Chapter 9, of this Code, or

2. After three (3) months but before viability of the fetus, if the abortion or attempt to procure a miscarriage is performed



with the pregnant woman's consent and in a hospital as defined in Section 53-1301 of this Code, licensed by the department of public health, or a hospital operated by the state of Tennessee or a branch of the federal government, by the pregnant woman's attending physician, who is licensed or certified under Title 63, Chapter 6 or Chapter 9, or this Code pursuant to his medical judgment, or

3. During viability of the fetus, if the abortion or attempt to procure a miscarriage, is performed with the pregnant woman's consent and by the pregnant woman's attending physician, who is licensed or certified under Title 63, Chapter 6 or Chapter 9, of this Code; and, if all the circumstances and provisions required for a lawful abortion or lawful attempt to procure a miscarriage during the period set out in part 2 of this subsection, next above, are adhered to; and if, prior to the abortion or attempt to procure a miscarriage the said physician shall have certified in writing to the hospital in which the abortion or attempt to procure a miscarriage is to be performed, that in his best medical judgment, after proper examination, review of history, and such consultation as may be required by either the rules and regulations of the state hospital licensing board promulgated pursuant to Section 53-1310 of this Code, or the administration of the hospital involved, or both, the abortion or attempt to procure a miscarriage is necessary to preserve the life or health of the mother, and shall have filed a copy of the certificate with the District Attorney General of the judicial circuit wherein the abortion or attempt to procure a miscarriage is to be performed.

f. No abortion shall be performed on any pregnant woman unless such woman first produces evidence satisfactory to the physician performing the abortion that she is a bona fide resident of Tennessee. Evidence to support such claim of residence shall be noted in the records kept by the physician and, if the abortion is performed in a hospital, in the records kept by the hospital. Violation of this section shall be punished as provided by subsection c.

SECTION 2. A physician performing an abortion shall keep a record of each such operation and shall make a report to the commissioner of public health with respect thereto at such time and in such form as the commissioner may reasonably prescribe. Each such record and report shall be confidential in nature and shall be inaccessible to the public.

SECTION 3. Tennessee Code Annotated, Section 39-302, is repealed.

SECTION 4. No physician shall be required to perform an abortion and no person shall be required to participate in the performance of an abortion. No hospital shall be required to permit abortions to be performed therein.

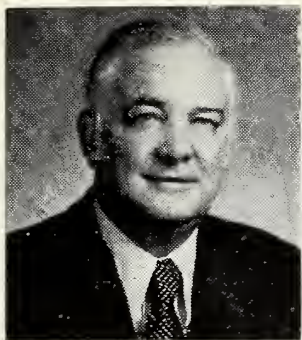
SECTION 5. No section of this bill shall be construed to force a hospital to accept a patient for an abortion operation.

SECTION 6. It is not the legislative intent to authorize or condone the practice of abortion. This act is in acknowledgement of an action by the United States Supreme Court apparently creating a void in Tennessee law regarding abortions and is intended to prevent the performance of unauthorized, unsafe, indiscriminate abortions.

SECTION 7. If any provision of this act or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or application of the act which can be given effect without the invalid provision or application, and to that end the provisions of this act are declared to be severable.

SECTION 8. This act shall take effect on becoming law, the public welfare requiring it.





MORSE KOCHTITZKY

## president's page

### *PSRO's*

We are well aware that Professional Standards Review Organizations are now a matter of law, but I suspect that few of us understand the ramifications this has for each of us. Some believe that PSRO as a law will have a greater effect on the practice of medicine in America than any other single act. I suspect this is true.

Our position with respect to PSRO's seems quite ambiguous. On the one hand, I consider it an abomination, and while I would like to see the effort to repeal the law successful, I do not believe this will occur. I would strongly insist that Medicine have the controlling voice in the establishment and operation of any individual PSRO, since I firmly believe that only physicians can evaluate the performance of their peers. If the bureaucrats led by Senator Bennett, and Jay Constantine, counsel of the Senate Finance Committee persists, and are successful in their insistence upon this being a Federal program, administered by the Federal Government, and are successful in their attempt to make each individual PSRO small and directly related to the Federal Government in such a fashion that they have effectively splintered us, then I would hope that the efforts of the Oklahoma Medical Association would prevail, and the AMA would then recommend to us that non-compliance was in order. This would in effect say to the Federal Government that physicians are unwilling to do this job within the established rules by which we cannot abide. (By the time you read this, the AMA meeting will have ended and whether or not this view carries will already be known.)

The other side of the coin is that PSRO's are in fact a matter of law. If we can have our rights assured as well as those of the Government and the public, then it is possible for us to formulate a system of review which we know is proper and which only we can effectively and honestly carry out. It is, therefore, the intention of the Tennessee Medical Association to be aware of the development under PSRO, and to be prepared to fit into the program as outlined by HEW, provided it is reasonably workable.

We have been assured of the opportunity to have input into such matters, as the geographical area determinations for Tennessee PSRO's, and have been assured by the Director's office (Dr. William I. Bauer) that they do not have rigid plans, but will be as flexible as possible in the establishment of these areas, both permanent and experimental.

We would hope that each individual physician will remain as informed as possible of the development of PSRO. The TMA office will provide you with all of the materials available to us which we hope you will read and digest and give to us your comments.

Sincerely,

President



# Journal

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JULY, 1973

## editorials

### ALCOHOL, GASOLINE—AND BLOOD!

In eleven years of war in Vietnam, 46,000 Americans lost their lives. This has fostered countless demonstrations, with charges of war-mongering and wanton murder of innocents, and statements like the recent widely publicized one by Jane Fonda that the only good Americans are those behind bars, and that all those should be released and everyone else (presumably excluding herself) should be imprisoned.

In those same eleven years, on our streets and highways approximately a half-million Americans died as a result of their own or others' carelessness. Another 17 million were injured. Depending on whose statistics you read, at least 200,000 of the dead, perhaps many more, were victims of alcohol (often someone else's). This is exclusive of the thousands who die yearly as the direct result of its ravages, and the hundreds of thousands

whose lives are wrecked by it. Yet few voices, and even fewer demonstrations, are raised against its use.

Since the Volstead fiasco, opposition to the use of alcohol has declined to the point where it is associated with a few fundamental preachers and dour kill-joys. To speak against it is almost like being against motherhood, which shows the extent of our blindness. Yet, twenty years ago, Aldous Huxley, author of the book *Brave New World*, if not an atheist at least an agnostic, opposed the use of alcohol on moral grounds for precisely the reasons being considered here—and the problem has increased many fold since then.

The press, social workers, and others have gotten a lot of mileage out of the "drug abuse problem," a term which oddly enough is generally used exclusive of what is by all odds our greatest drug problem. This editorial is certainly not intended to minimize the dangers of hard drugs, but the facts make an interesting commentary on human nature, since there are hundreds of alcoholics for every hard-drug addict. It is also interesting that from all indications the peak incidence of hard drug use has passed, as the young are finding that its hazards are real, and not just idle preachments of their elders, and as pushers are being seen as the murderers they are, and not as highly successful entrepreneurs, to be emulated. They—our potential drug users—are turning to "safer" pursuits, such as the use of alcohol.

The capacity of the human brain for rationalization is truly remarkable. You hear such things as, "Any food can be dangerous if you abuse it," or, "Just because people get killed riding in automobiles doesn't mean I should quit driving," or even the question almost as old as man, "Am I my brother's keeper?" We generally like to view the answer to that as Cain did, in the negative, which is clearly immoral, not only from a Biblical, but even from a humanistic, standpoint.

Man has always been incredulous as he contemplates the lemmings, which compulsively rush down the cliffs each year into the sea, to their destruction. Yet we emulate them almost precisely. It is not that drinking is all that new as a problem. Men were drinking fermented beverages, often intemperately, at the dawn of recorded history. Nor is its use, per se, insofar as I can determine, a moral issue, even on Biblical grounds. What is a moral issue is its



intemperate use, and the problem is in determining what constitutes intemperate use. Drunkenness is only the tip of the iceberg.

The problem became compounded with the invention of the mobile gasoline engine. Before that, it took a lot of drinking and some other defects of character for the drinker to become a public menace. He can now become one in a very few minutes with the aid of three martinis (or two—or one), a steering wheel, and an unsteady eye on the road. At sixty miles an hour, or even at thirty, it requires only a millisecond lapse, given the proper circumstances, to plunge oneself, and worse, others, into eternity.

I am aware of all of the arguments and rationalizations for the use of alcohol, having at one time or another used them all. To use one of the most widely quoted of famous last words, "I know my limit." But we physicians must at the same time consider our position as responsible people, leaders in the community, and ask ourselves, "Will my temperate use of alcohol encourage its intemperate use by others?" Society has made its use acceptable, and assumes it means temperate use—but it should know better. Because society has now assumed responsibility, we bear our individual responsibility lightly. Can we afford to?

Thousands dead on the highways each year, millions injured, many permanently maimed—these usually go unrecorded—millions of lives ruined—all by something which society regards as acceptable, even good. Are we interested in preventive medicine? And, more to the point, does the public—society—(and that includes us) *really* want the good health which it is claiming as a right? It looks as if this might be a good place to start.

## PSRO AND RESPONSIBILITY

In January of this year the much discussed and maligned HR-1 as amended became Public Law 92-603. One of its amendments created the Professional Standards Review Organizations, which floats in the government alphabet soup as PSRO, and which is often derogated by much less endearing terms. Although many organizations, especially AHA with its QAP, are trying now to get into the act, the law clearly states that the practicing physician is the key, and it gives him (us) three years in which to assume leadership. After this time, if we have not come up with a workable system,

the Secretary of Health, Education, and Welfare is charged by law to do so.

In view of these facts, I have been appaled by the movement in some circles toward non-compliance and non-cooperation. Whether or not we like the law, it is the law, and the alternatives to cooperation have far-reaching consequences.

Boyd Thompson, executive director of the American Association of Foundations for Medical Care says, "If PSRO's are to succeed, it will take a true partnership of interested, capable, dedicated organizations following the intent of the legislation—not just organizations concerned with self-protection. But most of all it will take the support and leadership of practicing physicians." Further, says Dr. John Farrington, in a paper printed elsewhere in this issue of the JOURNAL, "Without our leadership the capability exists of converting the well publicized crisis in health care into a national disaster."

Whether or not these evaluations are correct, and whether or not we like the law, it will unquestionably work to the detriment of our patients and to the public image and the entire future of our profession if we fail to provide responsible leadership. Disclaimers that this is simply a wedge to introduce socialized medicine stimulate the question in me, "So what is the alternative?" If we refuse to cooperate in this effort, in which we have been given the opportunity for leadership, I believe the public will see to it that legislation is passed requiring us to cooperate, and under much less favorable conditions. We must not lose sight of two things: first, we profess (we are a profession) that our first responsibility is to our patients; second, much of the public thinks we do not believe what we profess. We must not convince them, and the remainder, that they are correct.

At the present, we are pretty much in the dark as to what is expected of us, but leadership is developing, and guidelines will doubtless soon be forthcoming. There are, however, some things we can, indeed, should be doing already. I should like to report on and quote from some remarks made by Arthur G. Siwenski, M.D., the surveyor from the Joint Commission on Hospital Accreditation, in workshops held for medical staffs as a part of the survey. In it he sets forth a fairly clear picture of what PSRO's do and do not do. Our efforts here are to try to answer the abundance of rumor and misinformation



which is often being preached as gospel by those who either have not familiarized themselves with the law, or who have active and undisciplined imaginations.

Central to the PSRO concept is the medical audit, and the first phase of medical audit activity involves hospitalized patients. The initial step, therefore, must be the setting up of criteria: what we, the practicing physicians, think should be in the hospital chart. "There should be no difficulty about standards," says Dr. Siwenski. "We all recognize what we should have in a chart. We all recognize that we are not held by what local custom is any longer, but by what is done over the entire nation, communications being what they are. You are already held to a national standard. No longer does a local standard apply in any court of the land. Therefore, even though you set up your own standards, since all of us at least do a minimum of reading, we know what is expected of us. So standards should not deviate very much from one place to another. Now the regional PSRO's will set up guidelines, but they will be subject to the final guidelines that are promulgated by HEW. These regional ones will have an input into what HEW puts out. Whatever HEW says is going to go for the entire U.S., but I am certain that there will not be much variance from one place to another. Most of the things that we talk about are just good common sense.

"If we go about it in the right spirit, this is going to help us improve our own medical care, because we will know what we're doing in our institution, and that's fine. If we look at it from the standpoint that we're doing this because we have to do it for somebody else, we will do it with resentment and won't usually do a good job. We have exactly 2½ years in which to set up a good program in order to be able to guide our own destinies to a certain extent. But we must have a working model by that time.

"It will be time consuming, but only for the one time that you set up criteria for that particular diagnosis or that particular procedure. And if you consider that if you set up a good medical audit, when you do go into utilization you can do away with your utilization committee, and you can do away with your records and tissue committees because you're looking at the contents of the record. So, considering all the time that you spend on these other committees, the extra time will not be as great for the one committee as it is for the four other committees.

"In setting up your procedure, you will first consider what items in the history should always be mentioned, either positively or negatively, then do the same for the physical examination. Set down these criteria. Then do this also for the orders you would expect to see in a particular case, both the orders for diagnostic procedures and orders for therapy. Get all of these down into a check list. Then you would ask yourself how long we would expect the patient to stay in the hospital for this particular condition, and put that down. Put down what complications you might expect in the case, how often you would expect these complications, and how these complications would change your mode of treatment. Again you go back to orders and treatment, and then decide how much this would prolong the hospital stay. Put all of these down and you have your check list."

These criteria must be so specific that a medical records analyst can say without making any value judgment whether or not they have been fulfilled. It is important to keep in mind that she will be deciding only whether or not the chart fulfills the criteria set down by the *medical staff* itself, and she will note and report to the proper *staff* audit committee any deviations from them. The charge that the hospital will be telling you how to practice medicine is totally invalid, since this is all a staff function.

So much for the medical audit. The proper "chain of command" of the PSRO, and the function of each segment, is outlined in Dr. Farrington's paper, and there is no need to repeat it here. The purpose of this editorial is to assure you that PSRO's are with us, by law, and by all the evidence will be implemented and enforced; and to urge you, therefore, to assume a position of leadership before someone else assumes it for you. Admittedly, as this is written, the whole matter is in a state of flux nationally, but I think you can expect to see it gel quite rapidly in the near future.

One more thing—In the event national criteria are imposed, I can only reiterate Dr. Siwenski's words that there should be no difficulty about standards. In this day of adequate communication, everyone in a given field pretty well recognizes what should be done in a given situation, and in general there is agreement. The ultimate responsibility for the care of a patient rests after all with his physician, and whether we have PSRO's or not, the physician must be prepared to defend his position. This is a part



of his responsibility to his patient, his profession, and, not of least importance, to himself. In areas in which too often we have become sloppy and undisciplined, it is a way of making us shape up. The whole thing could have a very salutary effect. Whether we sink or swim depends largely on ourselves.

**WILLIAM T. SNAGG, M.D.**

We note with sadness the death in May of William T. Snagg, M.D., author of "The Cooper Quiz." Bill did a good job, and was enthusiastic about the quiz, which took a lot of his time. The notice we received stated the quiz would not be published for a few months, so hopefully a successor will be found to take over the job of editing the quiz. I know our readers join us in our sense of loss.



BOLLING, HARLIS O., Kingsport, died May 28, 1973, age 62. Graduate of Vanderbilt University School of Medicine, 1936. Member of Sullivan-Johnson County Medical Society.

CARRIER, EVERETT EUGENE, Chattanooga, died May 29, 1973, age 73. Graduate of University of Tennessee School of Medicine, 1928. Member of Chattanooga-Hamilton County Medical Society.

ROACH, MICHAEL J., Memphis, died May 8, 1973, age 70. Graduate of University of Tennessee School of Medicine, 1928. Member of Memphis-Shelby County Medical Society.

WEST, THOMAS HECTOR, Memphis, died June 3, 1973, age 68. Graduate of University of Tennessee School of Medicine, 1928. Member of Memphis-Shelby County Medical Society.

WILLIS, ARTHUR J., Jonesboro, died May 5, 1973, age 88. Graduate of Lincoln Memorial University, 1912. Member of Washington-Carter-Unicoi County Medical Association.

WORKMAN, RODNEY M., Southside, died May 31, 1973, age 70. Graduate of University of Tennessee School of Medicine, 1934. Member of Montgomery County Medical Society.



The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

**BENTON-HUMPHREYS COUNTY MEDICAL SOCIETY**

Dennis A. Savoie, M.D., Parsons

**CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY**

Catherine A. Boatwright, M.D., Chattanooga  
John Q. Durfey, M.D., Chattanooga  
William Carl Dyer, Jr., M.D., Chattanooga  
John C. Ellis, M.D., Chattanooga  
Robert Dale Hayes, M.D., Chattanooga  
Jeffrey A. Kahn, M.D., Chattanooga  
Gary K. McAllister, M.D., Cleveland  
Avelino V. Mercado, M.D., Chattanooga  
James G. Quinn, M.D., Chattanooga  
Leroy Sherrill, M.D., Chattanooga

**GREENE COUNTY MEDICAL SOCIETY**

William D. Diamond, M.D., Tusculum  
Gordon P. Hoppe, M.D., Greeneville

**KNOXVILLE ACADEMY OF MEDICINE**

J. Serge LeBel, M.D., Knoxville

**MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY**

Courtney L. Anthony, Jr., M.D., Memphis  
Jack C. Clark, M.D., Memphis  
Robert A. Crocker, M.D., Memphis  
Bobby F. Flowers, M.D., Memphis  
Robert S. Hollabaugh, M.D., Memphis  
Allen H. Hughes, M.D., Memphis  
James R. Johnson, M.D., Memphis  
Joe S. Levy, M.D., Memphis  
James J. Nickson, M.D., Memphis  
Peter J. Quinn, III, M.D., Memphis  
A. Neyle Sollee, Jr., M.D., Memphis  
Cirilo Sotelo-Avila, M.D., Memphis  
Alexander S. Townes, M.D., Memphis  
David A. Usdan, M.D., Memphis



**Knoxville Academy of Medicine**

The Knoxville Academy of Medicine met June 12 with scientific programs in surgery, pediatrics, general practice and psychiatry. A panel discussion was held on surgery titled, "Recent Advances in Carcinoma of the Breast." The Moderator was John E. Kesterson, M.D., and panelists included Mark P. Fecher, M.D., J. Marsh Frere, Jr., M.D., Ronald H. Perry, M.D., Stephen G. Wilson, M.D., and Bruce Avery, M.D. The Pediatric section heard George Cassidy, M.D., Neonatologist, and Director, Division of Perinatal Medicine, University of Alabama School of Medicine speak on "Recent Advances in Amniocentesis." The General Practice and Psychiatry section featured David S. Janowsky, M.D., Associate Director, Tennessee Neuropsychiatric Institute, Central State Psychiatric Hospital, and Associate Professor of



Psychiatry and Assistant Professor of Pharmacology, Vanderbilt University, who spoke on "Drug Incompatibilities."

### **Nashville Academy of Medicine**

At a recent Board of Directors meeting, the Academy adopted the establishment of a long-range planning committee to be composed of four members of the Board. Also, a recommendation that the Academy office administer the proposed unified hospital auto stickers for physician parking at local hospitals was passed.

### **Memphis-Shelby County Medical Society**

The Memphis-Shelby County Medical Society met on June 5. A panel discussion was held on "The Interrelationship of the College Coach, the Player, the Trainer, and the Physician." Panelists included Coach Gene Bartow, Coach Fred Pancoast, Trainer Eugene Smith, Dr. Wiley Hutchins and Dr. Paul Williams. The House of Delegates also met following the scientific session.

## **national news**

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

Strong protests from the American Medical Association and others has led the Secretary of the Department of Health, Education, and Welfare to hold letters from Social Security's Bureau of Health Insurance that ordered Medicare and Medicaid intermediaries to augment hospital utilization review by requiring a pre-admission certification program, and the use of national, regional or other appropriate data on length of stay by diagnosis to establish extended-stay cut-off dates.

In letters and visits with HEW Secretary Caspar W. Weinberger, AMA board chairman, John R. Kernodle, M.D. urged that "... The Social Security directive be reviewed, not only from the standpoint of its validity under the Medicare law, but also with respect to its apparent preemption of functions given by the Congress to Professional Standards Review Organizations (PSRO).

"... We believe the purpose of an intermediary letter should be limited to administrative matters affecting carriers. If providers of service are affected we believe that any changes should be the subject of proposed regulations under which the providers and the carriers are

given an opportunity to present their views. In the case of the intermediary letters under consideration, we question their validity and appropriateness at this time. We believe that they should not be issued at this time and that they would more appropriately be included in the PSRO regulations."

Social Security stated that the proposed new instructions in its intermediary letters "are intended to be supportive of the PSRO effort."

The reason for the new procedures, according to Social Security, is "increasing public concern at all levels over the need for more effective utilization of health care while maintaining or improving the quality of care rendered."

Social Security describes the new instructions as "processes that are to be employed for the period prior to the emergence of PSROs. Hospitals will require that the attending physician present appropriate documentation for use by the UR committee, or its representative, for approval of the hospital admission prior to—or at the time of—elective admissions, and within one working day subsequent to emergency or urgent admissions.

"A representative of the utilization review committee will review all applications for admission of Medicare beneficiaries; however, not all would be reviewed in the same depth. By employing a selection technique found appropriate by SSA, the utilization review committee will subject an appropriate number of the applications for admission to close, professional scrutiny. For example, the utilization review committee will be required to review intensively all questionable admissions (i.e., those involving questionable diagnosis, and treatments, for which close review is appropriate because of high cost, frequency of abuse, or propensity for potential misutilization.)

"All admissions approved by the utilization review committee will be certified by the committee for a specific duration based on appropriate percentile of past data (or other data acceptable to the Secretary). Where the committee does not approve the admission, the attending physician and the beneficiary is to be notified immediately, i.e., within 24 hours. Reviews of admissions are to be scheduled prior to or at the time of the expiration of the initial projected length-of-stay and in subsequent additional stays where the attending physician recommends and the utilization review commit-



tee approves continuing hospitalization. Appeal rights are to be provided to protect the beneficiary, hospital, and the attending physician from improper denials.

"The proposed new procedure calls not only for a change in timing of review but for analysis of utilization review findings and the correction of problems that are identified. . . ."

Social Security said the intermediaries would conduct on-site reviews to "verify that pre-admission certifications and subsequent reviews are made timely and conscientiously." Carriers would be required to exchange information to identify "potentially aberrant patterns of service and to take appropriate corrective action."

\* \* \*

Some 150 physicians representing 38 state medical associations and foundations have visited congressmen and federal officials to make a case that statewide PSRO coordinating systems should be permitted when the program is implemented.

The government has indicated it will permit statewide "umbrella" systems only in very small states though the law contains no such restriction. Chief congressional sponsor of PSRO, Senator Wallace Bennett (R., Utah), insists the intent of the law is to bar statewide setups in larger states.

PSRO is the provision of last year's Medicare-Medicaid amendments that calls for a structured professional review system for Medicare and Medicaid which will review initially all institutional care and later all care, including private physicians' care.

Most of the lawmakers visited expressed sympathy for the position of the state groups and said they would transmit the concern to HEW. At a follow-up meeting HEW officials, however, indicated no change in policy is planned at this time.

Henry Simmons, M.D., Deputy Assistant Secretary for Health, said: "It appears clear that statewide PSROs would be difficult to square with congressional intent." The legislative history of the provision, Dr. Simmons added, "makes plain" that there should be a number of PSROs in the larger states.

However, state and AMA representatives argued that there should be some arrangement under which a state-wide umbrella organization

can be part of the PSRO program, and that medicine desired a condition under which those state organizations which are interested and qualified could participate in a management role in the PSRO program in their states.

PSRO Director William Bauer, M.D., told the state representatives that he desired to be flexible in operating the program. He said final area designations won't be made until November at the earliest but he echoed Dr. Simmon's assertion that larger states won't be able to establish PSRO organizations that supervise the program throughout the state. "States with a significantly large number of physicians can be expected to have more than one PSRO," he told the meeting.

\* \* \*

In exchange of communications between the HEW Secretary and AMA officials, two other stands of organized medicine were made abundantly clear.

Dr. Kernodle in a letter to the Secretary took issue with Social Security's opposition to current procedural terminology (CPT) as a coding system for carriers. Dr. Kernodle said the AMA has spent many years and hundreds of thousands of dollars in developing "what we think is the finest and most complete description of medical and surgical procedures that is possible."

Dr. Kernodle pointed out that the physicians of at least six states and the carriers operating in these states wish and stand ready to put CPT into operation. But Social Security continues to prohibit this on grounds that it might raise costs. Actually, Dr. Kernodle said, studies indicate that costs increases would be minimal at most and at least one state has found the use of CPT reduced costs.

"All the American Medical Association is asking is that those carriers who wish to use CPT be granted the opportunity."

In the same letter to the HEW Secretary, Dr. Kernodle wrote: ". . . The final and most important point we wish to make (and one that is at the core of many other areas of concern) is our firm belief that medical and health matters currently under the jurisdiction of the Social Security Administration and the Social and Rehabilitation Service should be under the jurisdiction of the Office of the Assistant Secretary for Health."

The Senate has approved a drastically re-



duced Health Maintenance Organization bill (69-25) after liberal forces led by Senator Edward Kennedy (D., Mass.) fell back in retreat.

The measure that finally emerged after two days of debate called for spending \$805 million over three years to encourage development of pre-paid group practices or contract practice-type organizations. Last year, the Senate overwhelmingly voted a \$5.1 billion HMO program.

The legislation now goes to the House where a House health subcommittee has approved a \$280 million program. The Senate has been warned that any bill far exceeding the Administration's request for an experimental, \$60 million first-year plan may face a Presidential veto.

Confronted by surprisingly strong conservative opposition to the \$1.5 billion scale of the HMO bill reported by the Senate Labor and Public Welfare Committee, Kennedy was compelled to capitulate twice on the Senate floor. He first proposed a \$865 million substitute that would have relaxed many provisions of the original measure. At the end he switched support, successfully, to a Republican substitute introduced by Sens. Jacob Javits (R., N.Y.) and Richard Schweiker (R., Pa.).

The Javis-Schweiker bill authorized \$705 million. Added to this by the Senate was a \$100 million provision by Sen. William Hathaway (D., Maine) to foster HMO development in rural areas.

Kennedy said the revised bill would fund about 200 HMOs "which have been proven to work."

The bill adopted by the House Health Subcommittee several days before the Senate vote would aid about 100 HMOs at a cost of some \$280 million over three years. This bill still must be voted on by the House Commerce Committee and the House.

Criticizing the original HMO bill, Sen. Robert Taft, Jr., (R., Ohio) said the Senate would be "unwise to propagate by legislation a remedy for health care which has not yet passed any of the necessary tests. Before we even have a chance to get the test models off the ground, it is now proposed to fly with a whole fleet of HMOs."

\* \* \*

The creation of a new Joint Commission on

Medical Malpractice is being planned by major medical organizations as a means of curbing the rising number of damage claims and controlling health care costs.

Joining in the new venture would be the American College of Surgeons, American College of Physicians, American Hospital Association, American Medical Association, and representatives of medical specialty societies.

The plan was discussed by John R. Kernodle, M.D., Burlington, N.C., chairman of the AMA Board of Trustees, in a speech before the American College of Obstetricians and Gynecologists meeting in Bal Harbor, Fla.

"While the AMA has been active in the commission's formation," Dr. Kernodle said, "we are fully aware that it is only through joint action that the malpractice issue can be met.

"The commission will gather and disseminate information on the nature, frequency, costs, and causes of malpractice claims . . . and recommend equitable and appropriate ways of minimizing the claims problem."

\* \* \*

John A. D. Cooper, president of the Association of American Medical Colleges, has blasted the Nixon Administration's proposed budget cuts for fiscal year 1974, saying they present a serious financial blow to medical education, biomedical research, and health care.

"Without advance warning and apparently without any real understanding of the consequences of their decision," Dr. Cooper said, "the Administration is seeking to terminate support for research training, Community Mental Health Centers, Hill-Burton hospital construction, the Regional Medical Program, and capitation support for schools of Veterinary Medicine, Pharmacy, Optometry and Podiatry. In nearly all other areas of the proposed budget, the President is asking the Congress to curtail or cutback federal monies for health."

According to Dr. Cooper, federal support will be reduced 15 per cent below the level provided for in the President's amended 1973 budget which contained \$500 million less for health programs than his original fiscal 1973 budget. The FY '74 budget is 25 per cent less than the schools had anticipated.



"As a result of decreased federal funds the schools will be forced to discharge about 1400 faculty members, unless other support can be found. In addition to faculty cuts there will be a 15 per cent decrease in supporting staff positions," Dr. Cooper said.

personal news

DR. JESSE E. ADAMS, Chattanooga, has been named President of the Tennessee Heart Association.

DR. H. H. BARHAM and DR. CHARLES L. FROST, both of Bolivar, have received Certificates of Appreciation from the National Director of Selective Service in recognition of their professional assistance over the years as they served as Medical Advisors to Local Board No. 38.

DR. BLAND W. CANNON, Memphis, has been named recipient of the L. M. Graves Award, for outstanding service to community health.

DR. C. ROBERT CLARK, Chattanooga, has been named by the American Academy of Orthopaedic Surgery as an alternate delegate to the AMA Commission on Emergency Medical Services.

DR. LEMUEL W. DIGGS, Cordova, was honored at a recent meeting of the Tennessee Association of Blood Banks and was presented the medical pioneer award.

DR. JAMES H. ELLIOTT, Nashville, has been elected to the Board of Trustees of the Association for Research in Vision and Ophthalmology, Inc. at the Association's recent annual meeting.

DR. J. FRANK FISHER, McMinnville, has been named to receive the first CHEER Mental Health Association's Bell Ringer Award.

DR. CHARLES D. McDONALD, Chattanooga, has been certified by the American Board of Internal Medicine.

DR. ROBERT L. MILLER, Chattanooga, has received the annual award for outstanding work with children who have learning disabilities.

DR. JAMES W. WALL, Knoxville, DR. MARY E. BUKOVITZ, Morristown, and DR. CHARLES L. CAMPBELL, Oak Ridge, were all elected to Fellow-

ship in the American Academy of Pediatrics at its meeting in Boston.

DR. CHARLES M. WENDER, Knoxville, has been elected President of the East Tennessee Heart Association.

DR. DEXTER L. WOODS, Waynesboro, who recently resigned as Chief of Staff at Wayne County Hospital, has been presented with an inscribed plaque honoring his decade of service.

announcements

CALENDAR OF MEETINGS

NATIONAL

August 2-4	Rocky Mountain Radiological Society, Brown Palace Hotel, Denver
August 9-11	American College of Surgeons, Montana-Wyoming Chapter, Big Sky of Montana, Bozeman, Mont.
August 20-25	American Physiological Society, University of Rochester, Rochester, N.Y.
Sept. 6-8	American Association of Obstetricians and Gynecologists, The Homestead, Hot Springs, Va.
Sept. 12-15	American Thyroid Association, Olympic Hotel, Seattle
Sept. 14-15	American Society of Ophthalmologic and Otolaryngologic Allergy, Adolphus, Dallas
Sept. 15-16	American Association of Ophthalmology, Sheraton Hotel, Dallas
Sept. 16-20	American Academy of Ophthalmology and Otolaryngology, Convention Center, Dallas
Sept. 17-18	AMA Congress on Occupational Health, Ben Franklin Hotel, Philadelphia
Sept. 20-23	American Society of Internal Medicine, Interim Meeting, Marriott Hotel, Dallas





## continuing education opportunities

### Meharry Medical College CME Course

The following continuing education course is being offered by the Meharry Medical College during 1973:

November 3      Radiation Technology, Learning Resources Center

### Vanderbilt University CME Courses

<i>Date</i>	<i>Title, Location, Program Coordinator</i>
Sept. 19-21	Endocrinology (American College of Physicians) Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.
Sept. 26-28	The Injured Child (American Academy of Orthopedic Surgeons) Underwood Auditorium, Vanderbilt, John Connolly, M.D.
Oct. 10-12	Hypertension (American College of Cardiology) Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.
Oct. 25-27	Child Neurology, Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

### American Board of Family Practice Sets Certification Exam Date

The American Board of Family Practice announces that it will give its next two-day written certification examination on October 20-21, 1973. It will be held in various centers geographically distributed throughout the United States. Information regarding the examination can be obtained by writing Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506.

It is necessary for each physician desiring to take the examination to file a completed application with the Board office. Deadline for receipt of applications at the Board office is August 1, 1973.

### National Health Council Offers Short Courses

The National Health Council, through its Committee on Continuing Education announces ten short courses in 1973 selected for personnel of official, professional, and voluntary health agencies and organizations.

The course subjects will include: Comprehensive Health Planning, Consultation Skills, Community Organization in Health Care Services, Executive Development, Leadership Development, and Voluntary Health Agency in the Community.

The ten courses will be conducted by seven universities on various dates through August 1973. Co-operating universities are: Columbia University (School of Public Health), University of Florida (College of Health Related Professions), George Williams College (Division of Social Work Education), Indiana University (Graduate School of Business), University of Michigan (School of Public Health), University of Oklahoma (Department of Health Administration and School of Health), and Washington University (Office of Conferences and Short Courses).

Descriptive brochures and other information on these courses may be obtained by writing to: Continuing Education Program, National Health Council, 1740 Broadway, New York, New York 10019.

### Southern Ob-Gyn Seminar

The 19th Annual Ob-Gyn Seminar will be held again this year in Asheville, North Carolina at the Grove Park Inn, July 22 through July 27. Broad aspects and subjects in obstetrics and gynecology will be presented.

For registration information please contact the Secretary, Dr. George T. Schneider, 1514 Jefferson Highway, New Orleans, Louisiana 70121.

### Annual Otolaryngologic Assembly October 20-26, 1973

The Annual Otolaryngologic Assembly of 1973 will be held October 20-26, 1973, in the Eye and Ear Infirmary of the University of Illinois Hospital. The Department of Otolaryngology of the Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, offers a condensed basic and clinical program for practicing otolaryngologists under the direction of Emanuel M. Skolnik, M.D., with Burton J. Soboroff, M.D., as co-chairman. This program is designed to bring to specialists current information in medical and surgical otorhinolaryngology.

Interested otolaryngologists should direct their inquiries to the mailing address: OTOLARYNGOLOGY, P. O. Box 6998, Chicago, Ill. 60680.

\* \* \* \* \*

A separate, but correlated course, "CONFERENCE ON RADIOLOGY IN OTOLARYNGOLOGY AND OPHTHALMOLOGY" will be held this year on Friday and Saturday, November 23 and 24, under the guidance of Galdino E. Valvassori, M.D. For further information about the radiology conference, write to Professor Valvassori, Radiology Department, Abraham Lincoln School of Medicine, P. O. Box 6998, Chicago, Illinois 60680.



## Course in Laryngology and Bronchoesophagology

The Department of Otolaryngology, Abraham Lincoln School of Medicine of the University of Illinois and the Eye and Ear Infirmary of the University of Illinois Hospital, will conduct a continuing education course in Laryngology and Bronchoesophagology November 12 to 17, 1973. The course is limited to twenty physicians and will be under the direction of Paul H. Holinger, M.D. It will be held largely at the Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, and will include visits to a number of other Chicago hospitals.

Interested physicians will please write directly to the Department of Otolaryngology, Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, Illinois 60612.

## The 1st Invitational Symposium On the Sero-Diagnosis of Cancer

The 1st Invitational Symposium on the Sero-Diagnosis of Cancer co-sponsored by the Laboratory Service, Naval Hospital, Bethesda, the College of American Pathologists (CAP), the American Society of Clinical Pathologists (ASCP), and the Armed Forces Radiobiology Research Institute (AFRRI), will be held Saturday 29 September 1973, in the Naval Hospital Auditorium, National Naval Medical Center, Bethesda, Maryland 20014.

Wet workshops in methodology under the auspices of the ASCP will be offered the day preceding or following the symposium. The Symposium papers will be divided into three major categories: Enzymes in the Sero-Diagnosis of Cancer, Unique Antigenic Systems in the Sero-Diagnosis of Cancer, Glyco-Protein Correlations in the Sero-Diagnosis of Cancer.

A registration fee of \$40 will include attendance at the symposium, parking, noontime luncheon and a copy of the proceedings. Advanced registration is required.

For further information, including a copy of the complete program, information on nearby hotels and workshops, write: Symposium, College of American Pathologists, 1775 K Street, N.W., Washington, D.C. 20006; Telephone: (202) 466-2121.

## Symposium on Gynecological Malignancy

The 1973 Walter L. Thomas Symposium on Gynecological Malignancy and Surgery will be held at Duke University Medical Center, Durham, North Carolina on September 21 and 22, 1973. The two day symposium will be clinically oriented with the main emphasis on "Biological and Immunological Aspects of Gynecological Malignancies" and "Pelvic Infections." It is designed for the practitioners in Obstetrics and Gynecology.

Inquiries should be addressed to W. T. Creasman, M.D., Director of Gynecologic Oncology, Post Office Box 3079, Duke University Medical Center, Durham, North Carolina 27710.

## Second National Conference on Cancer Of the Colon and Rectum

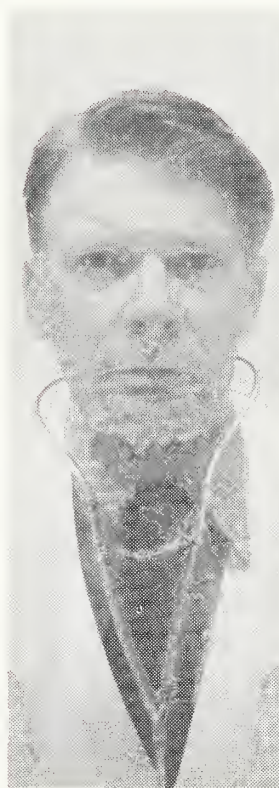
The Second National Conference on Cancer of the Colon and Rectum, sponsored by the American Cancer Society, will be held September 27-29, 1973 at the Americana Hotel, Bal Harbour, Florida.

This conference will present up-dated information by leading authorities in epidemiology, pathogenesis, etiology, host factors, detection, diagnosis, treatment and rehabilitation in cancer of the colon and rectum.

Contact: Sidney L. Arje, M.D.  
Second National Conference on  
Cancer of the Colon and Rectum  
c/o American Cancer Society  
219 East 42nd Street  
New York, New York 10017



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## Why I'm Finally Joining the AMA

*"I've changed some, the AMA has changed some, and the problems we all have to face together have changed enormously," says the author in explaining why he became a member.*

I have been in private practice for eight years now and have never been a dues-paying member of the AMA. In my opinion it's a clumsy, outdated cross between a trade union and a tissue review committee. I'm joining it today.

Why would anyone pay \$110 a year for the privilege of belonging to an outfit he considers anachronistic and not particularly representative of his views? The answer is that I've changed some, the AMA has changed some, and the problems we all have to face together have changed enormously.

My initial distaste for the AMA came from that strongest of influences, my family. From childhood on I listened to my surgeon-father and G.P.-uncle swapping medical stories and damning the AMA. Liberals both, they felt that the association was a reactionary dinosaur fighting against good medical care (I think they were correct). As some kids hear sea stories or legends of the pioneers, I heard how the AMA had fought Blue Shield and tried to stop the prepay Group Health Association in Washington, D.C.

Nothing I learned in college or medical school disabused me of this bias. I was an idealistic student when the AMA mounted its multi-million-dollar public relations campaign against Harry Truman's medical-care bill, and though I didn't like the bill, the campaign was even worse. The monolithic power of the AMA won, though, as it usually did in those days.

By the time I started my own practice in 1964, things had changed. The King-Anderson bill had become law over the AMA's objections. In my practice I saw that the concept of the AMA as an all-powerful guild was no longer accurate. Doctors danced to the tunes set by their specialty societies, their hospitals, and their local medical societies, and they couldn't have cared less what the people at 535 North Dearborn Street in Chicago were doing.

Clearly, the liberal journalists and reformers who continued to bark after the AMA as the dominant source of America's medical problems were mired in the rhetoric of the 1930s, '40s, and '50s. The AMA that they blamed for everything from low numbers of medical students to high infant mortality rates was now a paper tiger. Such observers of the medical radicals became aware of this. In their analysis of the situation, the nation's health problems stemmed from the fact that medical care had been taken over by a "medical-industrial complex" in which the stakes were hundreds of millions of dollars in construction contracts, equipment purchases, and fat HEW grants.

I agreed with much of this analysis and was pleased to see it get some circulation. Then a funny thing happened, I began to feel sorry for the AMA. And then, of course, I started to think seriously about joining it.

It wasn't merely pity or sympathy for the underdog that made many of us revise our thinking about the AMA. The very factors that had combined to make it an underdog were instrumental in making it a more acceptable organization.

One significant change is that the AMA is being increasingly harried by political opposition within medicine itself. Such groups as the Association of American Physicians and Surgeons and the Congress of County Medical Societies attack the AMA from the right, and are gaining strength. That growing number of American doctors consider the AMA to be a left-wing sellout to the Federal Government was unknown to me until some of my articles attracted the attention of conservative physicians. I then found myself addressing the national meeting of one of these groups, and discovered a well-organized body of dedicated, intelligent men. I admired their intensity and conviction. But many of their basic political premises turned me off.

Nor could I and many other "young" physicians join the growing left-wing movement in medicine, as exemplified by the Medical Committee for Human Rights and Physicians for Social Responsibility. These and other groups had strong representation in Eastern cities, and some of my friends belonged. Agreeing with many of their goals, I was put off by their pre-cut rhetoric and their inclination to take on every nonmedical social problem in sight. Even their views on medical matters, while



good-hearted, were naive. Many members had never practiced in the community, but were full-time employees of universities or the Government. I decided to work with them on specific projects—free clinics, draft counseling—but to forego membership.

Thus, in the politics of medical care, I was a man without a country. Up to this point, the dilemma had never bothered me. I had rationalized that avoiding membership in any medical organization left me free to write articles without being accused of bias.

But the little stirrings of sympathy for the AMA made me re-examine this position. One of the main objections to the AMA among liberal doctors had been its power. There had been something obscene about a professional group that so completely dominated not only its own profession but all the out-reaches of medical care. This was no longer so. The AMA now competes not only with other groups inside medicine but with the American Hospital Association and the American Public Health Association.

Moreover, the enormous power to control the practice of medicine once held by the AMA had shifted to the Federal Government. To any liberal or conservative nervous about the concentration of power in a single institution, it has become clear that the Government's influence in medical care must be balanced by a countervailing force—which only the AMA could provide.

Earlier I believed that the specialty societies had made the AMA obsolete. In some ways this is true—the AMA's conventions will never again have the scientific impact they once had and may eventually wither away. But as I reflected on American history and medical politics, it grew ever clearer that the more important the specialty societies become, the more essential it is to have a single group representing all physicians. As impressed as I am by the leadership in my own specialty's socio-economic arm, I'm sure the American Society of Internal Medicine can't bargain in Congress the way the AMA can.

The crux is that the AMA has changed, and so have I. I've seen some of the warnings of "reactionary" doctors come true—for example, the Federal subsidy of medical education is already being advanced as a justification for letting the Government tell doctors where to practice. My own "delivery of medical care" is

now hindered by a cobweb of FDA rules about telephone prescriptions, verboten medicines, and trial samples. Like many liberals, I think the Government's automatic attempt to solve problems by passing laws and imposing regulations has become counterproductive. The Government can and should protect the innocent, but only God can keep damn fools from acting like damn fools.

The acceptance by liberals of limits on Government intervention has been matched by their acceptance of some intervention by the AMA. Indeed, this is what its rightwing critics find so maddening. The AMA's stated policies are now consistent with the social philosophy of what might be called moderate Democrats and "Eastern" Republicans. The thunder about socialized medicine no longer comes from Chicago, but from the A.A.P.S. and other conservative groups.

In the confrontation between the AMA and Senator Kennedy, it seems obvious that the name-calling and the political power plays have come from the latter, not the former. Far from opposing prepaid medicine, the AMA concedes that it is a perfectly valid way to practice.

There are some things that only the AMA can do. Only it can drive home the single reform that would provide the greatest improvement in medical care for the least money—periodic relicensing and recertification. This would not only give the patient assurance of a reasonably up-to-date physician, but, done voluntarily, would put medicine a quantum leap ahead of other professions and occupations in self-regulations.

Most important, only the AMA can speak to the Congress and the people as the voice of medicine. To do this properly and to escape the justified charges that it has been overly representative of older, conservative, small-town doctors, the AMA must reform itself. It might begin by doing what Congress itself does—allow dissenting members to state their views on certain public issues in an official minority report. This would not invalidate the idea of "staying together," any more than a 5-to-4 Supreme Court vote is less valid than a 9-to-0 decision. Trying to preserve the myth of physician unanimity has led to a feeling of despair among dissenting members that their views would ever be reflected in AMA policy.

Nationwide referendums on key issues should be taken regularly among AMA members.



Electronic tabulators could enable local and state societies to poll their entire memberships, and the results would be available the next morning. What better way to end charges that the AMA is inflexible, its House of Delegates unresponsive?

I'm aware that such influential physicians as George Himler and Wesley Hall have banged their heads against the AMA hierarchy, which doesn't appear to have bent, much less cracked. But the early history of the AMA shows that for many years it was a progressive, reforming group, particularly when it had a strong cadre of academic physicians taking active part. As academic medicine diverged from practice, the reformers within the AMA became weaker and weaker. Recent small scale local rebellions show that youthful and academic doctors will join medical societies if the issues are pressing enough. Too often, however, such efforts are a temporary ballot-stuffing maneuver, with the "reform" element dropping out as soon as the critical issue is settled.

I'm encouraged by what I've read about last summer's AMA convention in San Francisco. The inclusion of a voting medical student within the House of Delegates may be tokenism, but tokenism often precedes genuine

reform. The increasing encouragement of intern-resident membership was evident at San Francisco and should be continued. A special attempt should also be made to reinterest academic physicians in the day-to-day work of the AMA.

I liked the valedictory by Dr. Hall and the salutation by Dr. Hoffman, though I disagreed with parts of each. I was encouraged by the printout of the membership poll on medical issues. Some questions seemed a bit slanted in wording, but the important thing is that the AMA is genuinely trying to find out what its membership believes. It hasn't got to instant across-the-nation electronic voting and tabulation yet, but it's on the way. I'm hopeful of further evidence of its growing responsiveness at the winter convention that's about to get under way in Cincinnati.

So off goes my check for \$110. I write it with open eyes. I think the AMA is going to change very slowly, but I'd like to help in some of that changing. So far as the future of medicine is concerned, the AMA is really the only game in town.

MICHAEL J. HALBERSTAM, M.D.  
Internist, Washington, D.C.

\* \* \*

### **Smoking Now Costly As Well As Hazardous**

Most people are aware that smoking is harmful to health, but there is now evidence that smokers are nearly twice as likely to be involved in traffic accidents.

According to an article which appeared in the January 31, 1973, issue of the *Congressional Record*, a major insurance company conducted a study in 1968-69, using 3,000 motorists. The company's findings backed up a previous study done by Columbia University showing that a significantly higher ratio of smokers than non-smokers have auto mishaps.

Farmers Insurance Group, the Los Angeles based company that did the most recent study, has extended a special non-smoker's discount to drivers in 20 western and midwestern states. It is anticipated that other insurance companies will follow this example.

Probable causes of smokers being more accident prone may be physical as well as psychological: Smoke in the eyes, falling ashes and lack of concentration on driving may play a part. An

insurance official also speculated that non-smokers are more conservative in their driving than smokers.

But there is another factor—smoking increases carbon monoxide content in the vehicle. Not only is the driver's ability to respond quickly adversely affected, but it can cause night blindness.

In view of this information, smokers who have thus far disregarded the findings of the Surgeon General and the medical community that smoking may cause heart and lung disease may now be convinced that their habit is more costly and hazardous than they had thought.

Smokers should weigh the consequences of their habit against any pleasure they may derive.

First, is it worth risking heart or lung disease? Also, is smoking worth taking the chance of becoming involved in a traffic accident which may cost you anything from increased insurance rates to your very life?

R. LeRoy Carpenter, MD, MPH

—Reprinted from the *Oklahoma State Medical Association Journal*, May, 1973

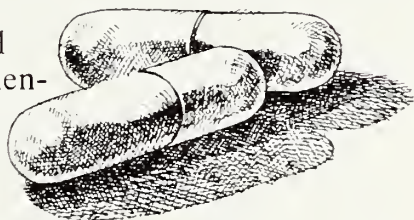


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**Precautions:** In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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## ANSWERS TO THE COOPER QUIZ (from pages 642, 643)

*JAMA, November 6, 1972*

1. TRUE. "Of 300 children with streptococcal pharyngitis, one group received a mixture of penicillin G procaine and penicillin G benzathine; a second was given a prescription for ten days of penicillin phenoxymethyl (parents of this group were given no special instructions); and a third was given identical prescriptions but their parents received specific counseling on the importance of taking the medication. There were 14 treatment failures plus relapse in group 1, 25 in group 2, and 10 in group 3. Compliance in taking penicillin was 58% in group 2 and 80% in group 3, a significant difference. Oral therapy with adequate parental counseling is as efficacious as intramuscular injection." (p. 657)
2. TRUE. "All hospitals receive large numbers of patients for diagnosis and management with abdominal trauma from various causes, including iatrogenic causes such as surgery. The difficulty of managing these patients is compounded by the fact that they often have altered consciousness due to head injury, intoxication, or shock. The physician has at his disposal numerous clinical and laboratory tests by which he can assess the possibility of hepatic or splenic injury. These include blood values, roentgenograms, and abdominal paracentesis. Many hospitals have come to rely extensively on angiography as well.  
"Scintigraphy is safe, simple, and rapid. It can be accomplished almost entirely with paramedical personnel—the physician need only diagnose the scintillation photograph. The equipment is available at most hospitals. The appropriate radiopharmaceutical, technetium Tc 99m sulfur colloid, is readily available at modest cost. The procedure requires no active cooperation on the part of the patient and can be performed with ease and complete safety in an unconscious patient. Since it will detect a lesion of 1 to 2 cm, it has a high order of accuracy for the type of hepatic and splenic lesions likely to be encountered in trauma. Both organs can be examined simultaneously without significant added difficulty." (p. 667)
3. FALSE. "The results of this study are similar to those of other surveys designed to detect nutritional anemia in that they demonstrate a high prevalence of iron deficiency during the early years of life, particularly the second and third years. In line with the work of Pearson et al, the study documents the decrease of nutritional anemia during later childhood, and its reappearance in adolescent girls, in whom, presumably, a marginal nutritional adaptation is inadequate to cope with the demands of puberty and menstruation.  
"What is suggested for the first time, however, is a trend in adolescence towards increased nutritional inadequacy not confined solely to girls.

Excluding those with hemoglobinopathies and Puerto Rican immigrants with parasitic infestations, there remained in this study several adolescent boys from low-income families among the 82 surveyed who had real iron deficiency anemia (with hypochromia and microcytosis seen on smear). Certainly, the number of individuals is too small to allow a confident statement; and those surveyed, enrolled as they were in a health care program, may have been representative of a peer group tending to utilize health services. But, taken with the somewhat high frequency of anemia found in the study among those 10 to 14 years of age (6.2% by hemoglobin determination; 2.4% by hematocrit determination)—a group in whom physiologic 'correction' should have presumably occurred—and the very high prevalence of iron deficiency among adolescent girls, suggests the need for continuing concern regarding the nutritional status of older children and adolescents in lower socioeconomic groups.

"Such a conclusion is reinforced by the finding of ethnic differences in both mean hematological values and the prevalence of anemia among 10- to 14-year-olds and adolescent girls. In these groups, blacks were more subject to nutritional anemia than either whites or Spanish-speaking children and youth. The basis of these differences remains to be elucidated, but the need for concern and further investigation is clear. In our eagerness to correct the dietary problems of infancy, we ought not to forget that iron deficits and nutritional inadequacies occur at other ages as well and need counseling and correction when discovered. Most important is the need for programs to prevent nutritional anemia in the teen-age population of our inner city communities." (p. 673)

*Nov. 13, 1972*

4. TRUE. "Fluoride seems to be readily filtered by the kidney but not readily secreted by the renal tubules. Reabsorption of fluoride is much less effective than that of chloride, phosphate, or sodium, although the same transport system or systems are utilized by these ions. The result is an efficient clearance of fluoride which exceeds by many times the clearance of chloride and other halides. It has been indicated that rapid urinary excretion is an important means by which the body prevents the accumulation of fluoride to toxic levels.  
"We believe that our patients had systemic fluorosis, as evidenced by the dental and roentgenographic bone changes. The dental findings in both patients were not those seen with tetracycline intake during tooth development, and neither patient had a history of taking the drug. The bony changes are those described by Singh et al in early endemic fluorosis and do not seem to be those of renal osteomalacia or osteodystrophy. The question is whether the chronic excessive fluoride intake caused the renal damage (either directly or indirectly) or whether the systemic fluorosis was due to impaired renal function.



"Fluoride, when given alone in sufficient quantities, can cause excretion of large volumes of dilute urine and increased thirst. In addition, renal pathologic changes, presumably due to chronic ingestion of fluoride, have been reported, but these findings have been nonspecific and could have represented preceding renal disease. Furthermore, no renal morphologic abnormalities were found at autopsy by three other groups of investigators in separate studies of persons who, during their lifetimes, were exposed to large amounts of fluoride. That chronic ingestion of fluoride-containing water is unable to cause renal damage per se seems to be further supported by the marked efficiency of the normal kidney to clear the ion. Most authors consider fluoride levels of 4 ppm or more necessary for the induction of systemic fluorosis. Most fluoride-treated water supplies contain fluoride levels of 1 to 2 ppm. Thus, in people with normal renal function, the frequency of systemic fluorosis should be negligible unless the fluoride content of the water is high.

"In recent studies of the anesthetic agent methoxyflurane, which can produce polyuric renal failure, the question of fluoride renal toxicity related to biotransformation of methoxyflurane was raised. This has not been proved nor has chronic absorption of fluoride alone been established as a causative agent of nephropathy.

"Sauerbrunn and co-workers described a patient with severe fluorosis in whom polydipsia was a remarkable feature. This patient also had evidence of significant renal insufficiency. Largent has postulated an enhanced risk of fluorosis in persons with reduced renal function. Both of our patients had renal diseases that resulted in polydipsia and polyuria. We believe that systemic fluorosis developed in our patients because of their renal disease and that the combination of polydipsia and renal insufficiency resulted in increased fluoride intake and retention. (p. 785)

5. TRUE. "The risk of developing various histologic types of bronchogenic carcinoma was determined in a ten-year prospective study of 6,136 older men in relation to smoking habits at the beginning of observation. No lung cancer developed in 830 nonsmokers. Among the 2,580 men who regularly smoked cigarettes only and who were current smokers on entry, the risk of lung cancer increased with increasing daily cigarette consumption. The cancers were typed according to a modification of the World Health Organization classification. Well-differentiated squamous-cell carcinoma, small-cell carcinoma, and adenocarcinoma showed a dose-response relationship to cigarette smoking, but poorly differentiated squamous-cell carcinoma did not." (p. 799)
6. TRUE. "Live attenuated rubella virus vaccines are safe and effective. Thus far, mass application in the United States has been to immunize prepubescent children to eliminate the reservoir of rubella cases from which susceptible adult women contract their

infections. Recently, the Public Health Service Advisory Committee on Immunization Practices has stated the desirability of having rubella vaccine use extended to adolescent girls and adult women provided they are shown to be susceptible to rubella by serologic testing and that the recipients agree to prevent pregnancy for two months after vaccination. The latter requirement is of special importance since the hazard of the virus vaccine to the unborn has not been defined.

"All the presently available rubella virus vaccines may cause occasional clinical reactions that are rubella-like, including transient joint involvement and lymphadenitis. These may differ somewhat among different strains of virus vaccine and with the passage histories of the viruses in the laboratory. Most important, the reactions in the joints increase in frequency and severity with advancing age." (p. 805)

7. FALSE. We believe that our observations documenting a high incidence of ventricular arrhythmia in patients with myocardial infarction and LBBB have important therapeutic implications. Patients with LBBB, acute or chronic, should be observed closely during the course of acute myocardial infarction. Prophylactic antiarrhythmic therapy should be administered at the slightest indication of ventricular irritability. Once begun, antiarrhythmic therapy should not be discontinued upon transfer from the CCU, but should probably be maintained for a considerable period, possibly indefinitely. Our data suggest that the post-infarction patient with LBBB continues to carry a high risk for potentially lethal ventricular arrhythmia. Unfortunately there are at present no guidelines other than continued presence of extrasystoles to evaluate the need for continued therapy. The potential risk of producing further atrioventricular or intraventricular block with presently available antiarrhythmic agents makes long-term outpatient drug therapy a calculated risk." (p. 924)
8. FALSE. "This study was undertaken in the hope that a simple, harmless procedure could in large measure be substituted for the more difficult and dangerous renal biopsy in patients with SLE. Since Pollack et al called attention to the apparent correlation between the course of the SLE patient and the type renal pathology, renal biopsy has been done with increasing regularity. Baldwin and associates again recommended renal biopsy, indicating that among their patients with renal disease, those with diffuse proliferative glomerulonephritis have a very bad prognosis, whereas those with membranous or focal proliferative glomerulonephritis may be expected to have a more benign course. Burnham and Fine had observed a three-fold greater frequency of positive skin test results in SLE patients with renal disease than in those without. Conceivably, those patients with nephritis and negative skin biopsies could well have had a type of renal disease with a good prognosis. From the outset, we hoped to establish that (1)



the presence of Y-globulin at the dermal epidermal junction of skin correlated well with the presence of renal disease, and (2) that one could with regularity determine the absence of the more severe renal disease (diffuse proliferative glomerulonephritis) by negative results of a skin test. Our data, after 29 biopsies, supported neither hypothesis, so that we discontinued the skin biopsy test except as a diagnostic test in difficult cases.

"Of perhaps greater significance, and disappointingly, was the clear evidence that the presence of positive skin biopsy results in SLE in a patient with renal disease did not correlate with the type of renal involvement pathologically or with the severity of the renal disease clinically." (p. 936)

9. TRUE. "Serum radioimmunoassay indicated the presence of carcinoembryonic antigen (CEA) in seven of 61 patients with inflammatory bowel disease. The only patient with a persistently positive assay result had proven colonic adenocarcinoma complicating chronic ulcerative pancolitis. Six patients without evidence of colonic cancer had transient antigenemia, which occurred in four during acute onset or flare-up of disease and disappeared with remission in three of the latter. Thus, a transiently positive CEA level in a patient with inflammatory bowel disease does not necessarily indicate the presence of colonic cancer." (p. 944)

10. FALSE. "Bioavailability may be defined as the relative absorption efficiency of a test dosage form relative to a standard oral or intravenous preparation. In our study, bioavailability is based on both the measurement of serum concentrations after a single oral dose of the drug and on the measurement of total unchanged drug excreted in the urine after a single dose. When applying the latter method it is imperative that essentially all the excreted drug be collected.

"The oral solution of digoxin is essentially completely absorbed whereas the digoxin administered in a tablet is only 75% absorbed. Bioavailability of the tablet relative to the oral solution is therefore 75%. Although this parameter can be more precisely defined with a larger number of volunteers than the four included in this study, the values should not change significantly. It must be emphasized that the bioavailability of 75% refers only to the tablets; the bioavailability of other digoxin products must be determined individually." (p. 958)

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11. (e). "It has recently been demonstrated that 1,25-dihydroxycholecalciferol (1,25diOHC) is the most active known form of vitamin D<sub>3</sub> in stimulating intestinal calcium transport and in mobilizing skeletal calcium. It has also been shown to promote the healing of rickets in the rat and rachitic puppy. The kidney is the only organ

known to be capable of completing the synthesis of 1,25diOHC from its precursor, 25-hydroxycholecalciferol (25OHC). Thus, 1,25diOHC cannot be produced by the anephric animal, and homogenates of kidney tissue from the rat, chick, dog, and man are capable of producing 1,25diOHC from 25OHC, in vitro. Moreover, the administration of small quantities of 1,25diOHC is capable of stimulating intestinal calcium transport and augmenting mobilization of calcium from bone in acutely uremic rats, whereas physiologic doses of 25OHC and cholecalciferol are without effect." (p. 891)

12. FALSE. "Patients with advanced renal failure often exhibit certain features similar to those of the vitamin-D-deficient state: hypocalcemia; impaired intestinal absorption of calcium; a high rate of osteomalacia on bone biopsy; and resistance to the action of parathyroid hormone. These abnormalities do not respond to physiologic doses of vitamin D but can be improved only after the administration of pharmacologic doses of calciferol. Knowledge concerning the kidney's role in the metabolic conversion of vitamin D to its more active form raises the possibility that impaired production of 1,25diOHC by the diseased kidney may be responsible for the 'vitamin-D-resistant state' of uremia. If this were so, the administration of small quantities of 1,25diOHC would circumvent this defect and produce a metabolic effect. The present report provides evidence for the high biologic potency of 1,25diOHC in uremic man and supports the hypothesis that impaired production of this compound by the diseased kidney may contribute to the osteodystrophy and the vitamin-D-resistant state in advanced renal failure" (p. 891)

13. TRUE. "Acute disintegration of muscle and myoglobinuria after intense, prolonged or repetitive physical exertion has become a widely recognized clinical entity. It appears that such rhabdomyolysis may occur in normal men provided they are under sufficient physical stress. Indeed, highly specialized laboratory techniques suggest that detectable quantities of myoglobin appear consistently in serum and urine after extreme muscular activity or trauma such as that incurred during participation in contact sports. Moreover, in untrained but not in trained men, intense exercise is consistently followed by a rise of CPK, SGOT, and LDH activity in serum to abnormally high values, presumably reflecting skeletal or myocardial-cell injury. Since these changes occur in healthy subjects, their designation as 'abnormality' seems to be questionable. In this context, although rhabdomyolysis per se is apparently but by no means positively benign in most cases, it may be a devastating, fatal illness as a consequence of acute renal failure and fulminating hyperkalemia." (p. 927)

November 9, 1972

14. TRUE. "The technic of total parenteral nutrition



as described by Dudrick et al has aroused great interest in pediatrics in that it affords a means of providing sufficient nutrients for growth solely by the intravenous route. In general, the nitrogen source of such infusates has been a hydrolysate of either casein or fibrin, glucose being the major caloric source. More recently, mixtures of synthetic L-amino acids have been substituted for protein hydrolysates in such infusions. This development is desirable in that it allows administration of a more reproducible amino acid intake, and preliminary experience with these synthetic L-amino acid mixtures suggests that they can effectively substitute for protein hydrolysates in producing weight gain and nitrogen retention." (p. 943)

15. TRUE. "Measurements of acid-base findings and of  $P_{aO_2}$  on oxygen with and without PEEP of 8 to 10 cm of water for 10 to 15 minutes should supplement the clinician's evaluation of cyanotic infants and allow him to separate many of those with lung disease from those with cardiac disease. It should then be possible to avoid cardiac catheterization and its hazards on most infants who, in fact, have lung disease. An occasional infant will still remain in whom cardiac catheterization will be required for satisfactory differentiation." (p. 953)

16. FALSE. "Despite widening concern over increasing cases of gonorrhea, primary attention remains focused on the genital orifices. It is worth pointing out that some patients thought to have ulcerative proctitis in fact have gonococcal proctitis, which can be readily treated.

"Stratified squamous epithelium resists invasion by the gonococcus, but surfaces covered with columnar and transitional epithelium are more easily penetrated. The most obvious route of inoculation is direct implantation by rectal intercourse, but in women, the infectious vaginal discharge from genital gonorrhea may soil the anorectal mucosa everted during defecation. Indeed, when it is looked for by direct rectal culture, rectal infection accompanies genital gonorrhea in 20 to over 50 per cent of women. Positive rectal cultures are the only indication of gonococcal disease in 6 to 10 per cent infected women, suggesting that inoculation may have occurred through rectal intercourse. In men, rectal intercourse is the obvious method of infection, since the genital discharge is unlikely to infect the anal mucosa. The rectum is sometimes infected by the rupture of a prostatic or pelvic abscess, but such infections are quite rare since the advent of antibiotics. In the past gonorrheal proctitis and arthritis in a newborn nursery was ascribed to contaminated rectal thermometers, but such an event seems unlikely of repetition today." (p. 967)

Nov. 16, 1972

17. TRUE. "If surgical injury is taken as an example of physiologic challenge to the hemostatic appara-

tus, there appears to be a direct relation between platelet and fibrinogen consumption. Similarly, venous thrombosis involves combined platelet and fibrinogen destruction: previous reports support these observations.

"A similar pattern of combined platelet and fibrinogen consumption occurs in a variety of pathologic states, including widespread neoplasia, obstetric complications and bacteremia. As in previous studies showing increased fibrinogen destruction in these disorders, the present data show the coexistence of equivalent platelet destruction. This type of pathologic consumption is usually referred to as 'disseminated intravascular coagulation.' Although relatively common, it often goes unrecognized, because platelets and fibrinogen may be maintained at near normal levels by compensatory increases in their production. The mechanism underlying the consumptive process appears to involve the release of some tissue thromboplastin-like material in response to cellular injury, with consequent activation of the coagulation process and incorporation of platelets in the resultant fibrin. The ability of heparin to modify the consumptive process supports this view." (p. 1004)

18. FALSE. "The oral diuretics are an effective group of drugs in the treatment of hypertension. The benzothiadiazine derivatives chlorothiazide and hydrochlorothiazide were the first of these agents to be introduced. More recently, three other oral diuretics, chlorthalidone, furosemide and quinethazone, have proved to have a similar effect on blood pressure. Ethacrynic acid may have similar properties but has not been as completely evaluated. The potassium-preserving oral diuretics, spironolactone and triamterene, have been shown to have an antihypertensive action similar to that of other diuretics." (p. 1018)

Nov. 30, 1972

19. FALSE. "The single-injection technics that have been introduced to measure renal function without urine collection depend on the determination of the rate of disappearance of the substance from the plasma. These methods have the advantage over the infusion method that an approximate level of renal function need not be known to calculate the dose of test material to be given. However, the single-injection technics have major disadvantages. Although plasma disappearance curves can readily be calculated in patients with normal renal function, repeated blood sampling over a period of many hours may be required to obtain reasonably accurate estimates of GFR in patients with impaired renal function. Moreover, the rates of distribution and the number and types of compartments into which the compounds used for these determinations diffuse are still in question so that the mathematical interpretation of the disappearance curves is still uncertain. However, good approximations of renal function have been obtained by these methods, which thus warrant further evaluation." (p. 1113)



EDITOR'S NOTE: The substances used for single injection were insulin and para-aminohippurate.

20. TRUE. "Case records of 425 patients with Hodgkin's disease treated at the NIH were reviewed. Note of all biopsy-proved malignant tumors other than Hodgkin's disease was made. Cases were divided into subgroups on the basis of treatment received, and expected incidences of malignant tumors were calculated for each subgroup on the basis of age, sex, and mean follow-up period from the time of diagnosis of Hodgkin's disease.

"Significantly increased risks of development of second malignant tumors were found in the entire 425 patients (ratio of observed to be expected, 3.5) and in the subgroups treated with both radiotherapy and chemotherapy (ratio, 3.3) and with intensive radiotherapy without intensive chemotherapy (ratio 3.8). The greatest increase in risk was observed in 35 patients who received both intensive radiotherapy and intensive chemotherapy (ratio, 2:9)." (p. 1119)

21. TRUE. "Various authors have emphasized the protean manifestations of primary histoplasmosis, but none have stressed polyarthritis as the predominating clinical manifestation. In this patient the etiology of the polyarthritis would have been misdiagnosed as probably viral or of 'unknown cause' if histoplasmosis had not been confirmed.

"Joint manifestations in association with primary acute histoplasmosis are mentioned infrequently, and such reports have concerned mainly epidemic outbreaks in which skin lesions of erythema nodosum and erythema multiforme were the major clinical manifestations.

"This case emphasizes the importance of considering acute primary histoplasmosis in the differential diagnosis of the various entities commonly associated with polyarthritis, such as acute rheumatic fever, rheumatoid arthritis, lupus erythematosus, coccidioidomycosis, sarcoidosis, virus infection, and the recently described syndrome of 'periarticular inflammation, bilateral hilar adenopathy, and a sarcoid reaction.'" (p. 1134)

#### ANNALS OF INTERNAL MEDICINE

November 1972

22. TRUE. "Smoking cigarettes causes a significant increase in carboxyhemoglobin levels in normal subjects and in patients with angina pectoris caused by coronary heart disease. The increased carboxyhemoglobin levels caused by smoking non-nicotine cigarettes decreases the rate of oxygen delivery to the myocardium, with angina pectoris developing sooner, after less cardiac work. In Los Angeles, an association between atmospheric carbon monoxide pollution and case fatality rates for myocardial infarction has also been observed. Carbon monoxide exposure has also been implicated in the pathogenesis of atherosclerosis." (p. 669)

23. FALSE. "ECG manifestations related to myo-

cardial hypoxia, necrosis, conduction disorder, rhythm disturbance, and superexcitability apparently provide not only important diagnostic information but prognostic information as well. Moreover, a normal ECG in ambulant male infarct survivors appeared, in itself, to be a favorable prognostic indicator." (p. 687)

EDITOR'S NOTE: If you are interested in the ECG changes that provide prognostic information (and those that don't) we refer you to the same page but column 1, paragraph 2.

24. TRUE. "Different types of analysis showed that several ECG findings in infarct patients provide useful prognostic information independent of clinical status. In a simple analysis the mortality experience was compared for those with and those without an ECG finding, according to the presence or absence of given clinical characteristics. The ECG provided independent information about risk." (p. 687)

25. FALSE. "The principal objective of this study was to determine whether the ECG itself is independently important in the estimation of prognosis in survivors of myocardial infarction; it is not meant to propose, however, that the ECG is the sole or the most important prognostic indicator. But, in fact, the ECG contributes five of the ten clinical measurements most important to mortality risk prediction in the Coronary Drug Project men. An ST-segment depression in the resting ECG is as strong a risk predictor as are cardiac enlargement and functional class in these infarct patients. The important point is that the ECG contributes information independent in addition to the other clinical assessments. An ST-segment depression, for example, is important not only because of the high risk ratio associated with it but because such a considerable proportion of men had this finding (25%) and such a considerable proportion of deaths (45%) occurred among them.

"These data on the natural history of myocardial infarction from the Coronary Drug Project deal with the prognostic importance of static findings, those in a single resting ECG at entry. It may be of considerable practical and conceptual importance to examine more dynamic variables and changes between measurements as risk indicators." (p. 687)

26. FALSE. "The first of three prospective studies on posttransfusion hepatitis in open-heart surgery patients at the National Institute of Health (NIH) was initiated in 1965. That first study demonstrated the risk of commercial blood; 50% of multiple transfused patients who received primarily commercial blood developed anicteric or icteric hepatitis. The second study, begun in 1968, showed the risk of receiving blood contaminated with hepatitis-B antigen (HBAG, Au-SH antigen); 69% of patients receiving at least one unit of HBAG-positive blood developed hepatitis, of which 50% was



icteric. In that second study, donor units were tested retrospectively for the presence of HBsAg, whereas patients were followed prospectively for the development of hepatitis." (p. 691)

27. TRUE. "In our study the simultaneous exclusion of commercial and HBsAg-positive donors resulted in a hepatitis rate remarkably close to that predicted. Nine (7.1%) of 126 patients developed hepatitis (3 cases icteric). Based on an average transfusion number of 19 units per patient, this represents a hepatitis risk per unit of 0.37% (3.7 cases/1000 units) and an icteric risk of 0.13% (1/3 cases/1000 units). Although it is impossible to sort out totally the relative importance of each variable altered, it would appear that the exclusion of the commercial donor was the most significant determinant in the marked decrease (82%) in the hepatitis rate that was achieved." (p. 696)

EDITOR'S NOTE: It is to be remembered that these were open-heart patients receiving an average of 19 units per patient.

28. TRUE. "Patients with acute nonlymphocytic leukemia have a median survival of about 12 months if they achieve a complete remission but tend to die within 3 months if they either are left untreated or fail to respond to antileukemic therapy. Infection is the major cause of morbidity and mortality in these patients and is the single commonest complication, resulting in an early death before remission can be achieved. Prevention of these infections is essential in order that more patients may achieve a complete remission and, hence, a prolonged life-span." (p. 707)

29. TRUE. "For the past 30 months, routinely obtained surveillance cultures from 48 patients have been used to define their microbiologic flora at admission and to detect later acquisition of organisms from the hospital environment. These cultural data, correlated with the patient's infections, form the basis of this report with particular emphasis being placed on colonization and later infection by *Pseudomonas aeruginosa*. Almost all infections in these patients arose from the patient's own resident flora, but in about half of the microbiologically documented infections the infecting organism was hospital acquired." (p. 707)

30. FALSE. "In granulocytopenic patients infection is often difficult to recognize. Most patients have fever but often have little evidence of inflammation. For example, anorectal lesions may present as erythema and pain at the base of a hemorrhoid,

without obvious true abscess formation; pneumonias may present with nonproductive cough and minimal radiographic evidence of infiltrate; and pharyngitis may present as erythema without exudate or cervical adenopathy. Because of the significance of such infections (that is, their progression to bacteremia or death or both), it is imperative that minimal evidence of infection be recognized and not ignored." (p. 711)

31. FALSE. "The results show that none of the commercially available human serum immune globulin preparations tested contain diphtheria antitoxin in a sufficient concentration to be of practical value for antitoxic therapy of diphtheria. The administration of any of these preparations in amounts equal to the currently recommended antitoxin doses is volumetrically and financially impossible. Preparations obtained from smaller donor pools, for example, pertussis human immune globulin, might have higher titers of human antitoxin than those present in human immune serum globulin (U.S.P.), which is made from a larger donor pool. It seems unlikely, however, that any human globulin preparation, as currently formulated, is of any therapeutic value as a diphtherial antitoxin." (p. 758)

32. TRUE. "The occurrence of gout, renal calculi, and hypotension has been observed, but these are manifestations associated with extensive, rapid weight loss from any cause and are not ascribable specifically to surgical treatment.

"Peculiar to small-intestine bypass and so far unexplained are the development of a nonspecific polyarthritis and of fatty degeneration of the liver. In most cases the course of events seems to be benign and transient, but massive fatty infiltration, progressing in some instances to cirrhosis and hepatic necrosis, has been described. The maximum changes coincide with the period of acute weight loss. With stabilization of weight and with a balanced dietary intake the fatty changes tend to regress.

"One serious problem is that liver function tests may continue to be normal or near-normal while structural changes are well advanced and progressive, as was noted in a subject whose 1-year postoperative liver biopsy slide is shown in Figure 14. Therefore, base-line and serial follow-up liver biopsies are essential over an extended period and at least until body weight has remained stable for several months. In patients with progressive deterioration toward cirrhosis the reestablishment of normal bowel continuity arrested and even reversed the process." (p. 792)



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## (methacycline HCl)

**CONTRAINDICATIONS:** Hypersensitivity to any of the tetracyclines.

**WARNINGS:** Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

**Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

**Usage in newborns, infants, and children.** (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

**PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

**ADVERSE REACTIONS:** **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

**Skin:** maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

**Renal toxicity:** rise in BUN, apparently dose related (See **WARNINGS**).

**Hypersensitivity:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

**Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**USUAL DOSAGE: Adults**—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

**Children**—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

**Concomitant therapy:** Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

**SUPPLIED:** 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

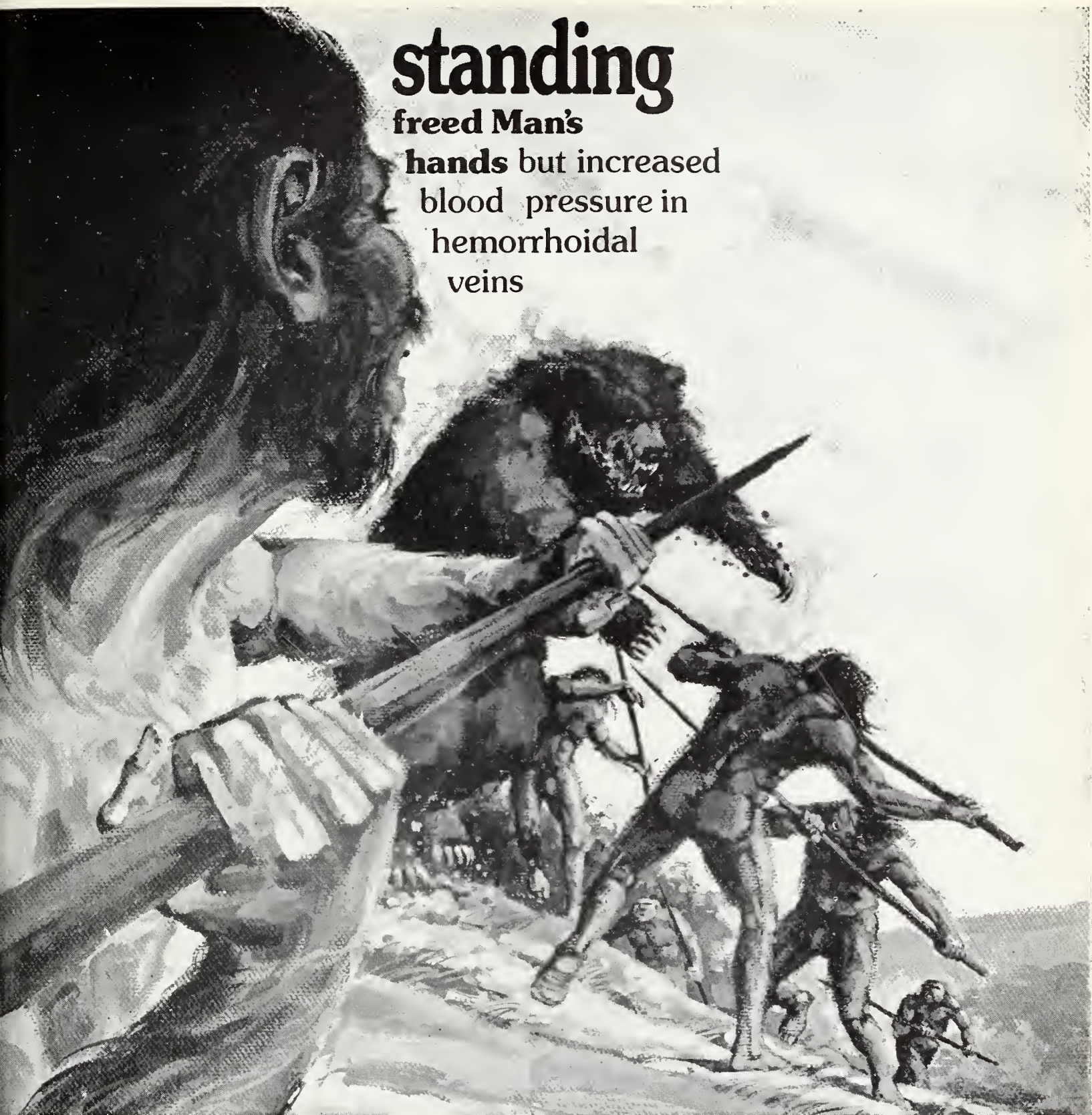
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Rev. 6/73



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Manuscripts must be typewritten on one side of letterweight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer. The pages should be numbered and clipped or stapled together, but they should not be placed in a binder.

Bibliographic references should not exceed twenty in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, FG: What is Known About it, J. Tennessee M. A., 35:132, 1950.

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## *Noise in the Environment<sup>†</sup>*

DAVID M. LIPSCOMB, PH.D.\*

The story is told of a group of scientists who had fashioned a time machine which consisted of a robot programmed to journey to a future year and collect samples of the culture of that time. On its maiden journey, the robot returned to the anxious group with its collection bins empty. The disappointed comment was made by one member of the development team: "It didn't work!" The leader of the group responded by saying, "Oh, no! I'm very much afraid it did."

This anecdote gives some of the essence of the concern for the condition of the present environment and for the future of the "beleaguered" earth. Some have been inclined to warn of dire circumstances surrounding the overuse of valuable resources. About fifteen years ago, we never gave the first thought to the possibility that needed resources were anything but infinite. The seemingly endless supply of fossil fuels, clean air and pure water seemed to signal a cheery future for all descendants. How different the picture appears today!

During the return trip of Apollo 13 in April of 1970 after the explosion of the service module, most of the citizens of the civilized world became acutely aware of the limited resources aboard the tiny damaged craft.

This was the drama which made Buckminster Fuller's "Spaceship principle" a newly distinct reality in the minds of many who formerly gave little thought to such an idea. The dilemma aboard the Apollo spaceship can be thought of

as a miniature enactment of the approaching problems to beset man aboard the planet earth. The resources available and their use determined the quality of the environment of Apollo 13. Certainly, a smelly spaceship is not a happy one. A spaceship whose air causes the crew to cough, choke and wretch cannot be a happy spaceship. And a noisy spaceship would not be a happy place, either.

Nearly four billion inhabitants are on this "spaceship" (earth) hurtling through the solar system with abundant, but finite resources. Continuing investigations have already pointed out that this terrestrial craft has badly fouled water and air. Most of its inhabitants have also found this home to be overly noisy—and, they are not very happy about it.

The situation can be colored to appear pretty grim. In fact, if the threats to existence are not taken seriously, the future does not appear to be altogether bright.

A word in current vogue is "eco-catastrophy." It is used to promote thoughts of an impending environmental contamination which will leave man poisoned by the water he drinks, gasping for a safe breath of air, half blinded by the glare and reflections of metal skyscrapers, covered by garbage and distraught by the sound around him.

In these days of numerous types of pollution, an increasing number of students of the environment have tended to classify noise as one of those pollutants. They have observed that the average sound to which people are exposed each day is on the increase. Dr. Vern Knudsen, leading acoustician and professor at UCLA has indicated that sound levels in some cities are up as much as 20 decibels (dB) over the level known 20 years ago. This represents a ten-fold

<sup>†</sup> Submitted by invitation. Portions of this article have been excerpted from a forthcoming book by the author entitled: ENVIRONMENTAL NOISE: AN UNPRODUCTIVE BY-PRODUCT (Chicago-Nelson-Hall Publishers).

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increase in the sound pressure bearing in on the eardrums. Of course, it must be pointed out that not all communities have experienced a rise in the noise levels of these dramatic proportions, but it is known that virtually all growing communities are noisier today than they were two decades ago.

It is quite clear that this gradual increase in noise levels cannot be allowed to continue. Many cities experience high sound levels at present and growth in this noise is tantamount to destruction of the human way of life. During the high activity hours, the sound levels in downtown Tokyo seldom go below 88 dB. In New York 90 dB sound is common at rush hour times. These levels are sufficiently high that one would need to shout in order to communicate with a companion standing within three feet. In addition, these figures extend into the danger zone for hearing health. Long term exposure to such sound may cause permanent loss of a portion of one's hearing. Growth in urban sound levels at the previous pace of as much as 1 dB per year can no longer be tolerated. Slow, but steady rises in urban noise levels will lead to the very undesirable condition of sheer cacophony if allowed to continue unabated.

#### NOISE DEFINED

Noise, defined as unwanted sound, has been known for a long time. There are biblical citations of certain aspects of loud sounds wherein man is commanded to "be still and know" (Ps. 46:10). Ancient literature refers to some sounds as being unthinkable, and more recent writings have amplified the undesirability of excessive high level sounds.

In the name of progress noise has often been regarded as an undesirable but necessary by-product. As an example, the advent of air travel brought with it the feeling on the part of many that aircraft noise must simply be tolerated. The same attitude held for a great many years with respect to a multitude of other noisy sources—lawnmowers, vehicles, tools, construction equipment and sirens, to name a few. In recent years, however, the public has become remarkably less tolerant of noise.

Early recognition of excessive noise exposure as posing a hazard to the hearing sense cannot be cited with full accuracy. Surely a connection was drawn between the great noises of earlier days and loss of hearing. With respect to industrial noise, Fosbrooke observed in 1830 that

the work environment of the blacksmith was such that hearing handicaps were the result of prolonged tenure in that occupation. A short while later, the boilermaker was seen to have a characteristic occupationally-related hearing loss. Since those early days, the effect of noise upon the hearing capability of industrial workers has become an increasing source of concern for members of the hearing health community.

Noise damage is not restricted only to those whose jobs call for large doses of sound stimulation. When he was President, Lyndon Johnson stated: "What was once . . . described as 'the busy hum of traffic' has now turned into an unbearable din for many city dwellers. We dare not be complacent about this ever-mounting volume of noise." During his days as staff assistant to the science advisor for the U. S. Department of the Interior, Martin Prochnik declared that noise is just as important as any other kind of pollution.

It is apparent that noise has made itself known. Few causes for the deterioration of the quality of life are so common to so many persons. Although the commitment of the Federal government is not as sizeable as those of us who spend most of our waking hours studying noise would like to see, one still takes comfort in the fact that noise is being included in the environmental quality pronouncements of elected officials. It is encouraging to learn that the summit environmental pact signed in Moscow during President Nixon's visit in May of 1972 included noise as one of the environmental contaminants which the U. S. and U. S. S. R. agreed to strive together to control.

On October 18, 1972, the 92nd Congress passed the Noise Control Act of 1972. A few days later, President Nixon signed the bill into law. This is the strongest environmental noise legislation in our history, representing a compromise between a very strong bill (S.3342) advanced by Senator Tunney (California) and a somewhat milder House version (H.R. 11021).

The new law gives the U. S. Environmental Protection Agency authority to set noise emission levels for a variety of products, including motor vehicles, construction equipment, internal combustion engines, tools, machines and household appliances. Also the EPA will be authorized to require labeling of products for noise emission. Further, the law is a mandate to the EPA for research to determine more fully the



harmful physiological effects of noise and the technological feasibility of noise reduction. Previously, the EPA had zero funds for such research.

## OUT OF THE PAST

Noise is not an altogether new area of concern. In their introduction to the proceedings of a conference on Noise as a Public Health Hazard, W. D. Ward and James Fricke speculated jocularly that the first noise problem may have occurred when Eve poked Adam in the remaining ribs and told him to stop snoring.<sup>1</sup>

Many years ago, the Roman poet, Horace, fiercely denounced the "barking of the mad bitch and the squealing of the filthy sow," two environmental noises which quite obviously disturbed this historic man of letters. A modern translation of the Old Testament quotes the prophet, Amos, condemning the court of King Jeroboam by saying, "Your musicians played so loudly in entertaining the rich that you could not hear when poor folks cried out for help!"

The eighteenth century philosopher Scholpenhauer wrote in 1788 ". . . the truly infernal cracking of whips in the narrow resounding streets of the town must be denounced as the most unwarrantable and disgraceful of all noises." Thus, appeared an early invective against traffic noise. It was not the first, for some accounts describe that some of the officials of Rome were disturbed by the sounds of chariot wheels on the cobblestone streets of that great city.

On some occasions, sound was purposely used to torment and defeat an enemy. In the third century a Chinese proposal for defeating the enemy prescribed that flutes, drums, and chimes or bells be sounded without hesitation until the adversaries drop dead. This formula was advanced because the author believed that noise trauma was the most agonizing death he could conceive. That idea brings to mind the famous battle fought by Joshua at Jericho as presented by ancient biblical accounts.

Because sound is one of the most familiar and useful parts of the environment, it stands to reason that some sounds have served to distract and irritate people throughout the history of mankind. The value of sound lies in the information it provides. If there is no information, it is usually regarded as noise. Sometimes, however, the decision as to whether a sound is information or noise is not easy. Frequently,

it contains some elements of both. Consider the sound of a machine. To the machinist, it carries information because it gives him a clue as to the quality of its function. But for the man at another work station, the sound is noise for it carries no useful information to him other than the news that the blankity-blank thing is turned on again.

This concept gives rise to a nearly infinite complexity which can be lumped under the heading "man's response to sound."

## THE NOISE PROBLEM

A common catch phrase in the popular literature alludes to "the noise problem." It is important to note, however, that the subject has not yet been reduced to a definable entity. It is safe to estimate that none of the workers in this area of professional concentration understand fully the many factors in order to encapsulate it with a single or simple description. For this reason, the problem of noise continues to be a mystery. This is because neither the parameters nor the depth and breadth of each factor are well enough understood to allow comprehension of the full effect of sound stimulation upon human (and animal) existence.

In addition to the above problem of definition, one must consider the wide range of individual differences in responsiveness to various sound stimuli. It can be said, for example, that one man's noise is his son's music. Mental set, orientation, experience, personality, health, and myriad other personal factors confound the attempt to fully and comprehensively recognize all of the ramifications of "the noise problem."

It is not possible to be absolutely confident in predictions of the effects of the increasingly greater noise levels upon future generations. There have been those who issue serious warnings about devastating problems which will beset later inhabitants of this planet if noise, along with other environmental contaminants, is not controlled and reduced. These forecasts may, or may not be viable. That is part of the problem—man doesn't know.

It seems that noise is a natural by-product of man's expanding technology. Wherever man goes, he takes his technology with him, thus, environmental noise is on the increase with continuing technological expansion.

Today's vast technology was triggered by the industrial revolution. This revolution has proclaimed the philosophy that the machine should



be the servant of man to ease his burdens, raise his standard of living and to multiply his productivity. From the beginning, there has been precious little regard for the harmful and esthetic problems which technology may bring about. This is unfortunate, for the great minds which have designed and built complex and purposeful mechanisms are fully capable of incorporating environmental considerations into their design.

From an acoustician's stance, the technological revolution has been a blight. It has given rise to noise-generating devices which, if some thought had been given to the sound output during the designing stages, could have been made to function more quietly. A hopeful sign is that some industries are now beginning to assess their products with respect to the noise potential they possess. Unfortunately, these steps are long overdue.

In 1968, when he was the Surgeon General, Dr. William H. Stewart said, "Calling noise a nuisance is like calling smog an inconvenience. Noise must be considered a hazard to the health of people everywhere." In that statement, Dr. Stewart put noise in the same category as a virus. It is something which must be controlled, and where possible, eliminated. During his keynote remarks before the First National Conference on Noise as a Public Health Hazard, Dr. Stewart declared, "These movements (steps toward abatement) must become stronger in our jet age world than the noise they seek to abate. Noise is not something we are going to be able to live with. It must be controlled, on the drawing boards and in the courts."<sup>1</sup>

Noise affects so very many aspects of our lives that it has become an increasingly great source of concern for many and diverse professional groups. The word: "noise" comes from the same Latin root as does "nausea." Further, is it just a coincidence that "noise" and "annoy" rhyme? These are not very favorable relationships for a descriptive term. They connote much more than a simple or superficial response. Noise reaches into the depth of man's being. It disrupts the complex processes which strive to provide physical and chemical balances for the body.

Noise is an important determinant in understanding the quality of life. For that reason, it is important to step out of the laboratory long enough to bring some of the most recent

information to an interested group of physicians.

The headline of an article in the *New York Times* stated, "America Waking Up to Noise Pollution." Hopefully, those words are prophetic and the realization will be reached that noise in the environment deserves adequate treatment and control for it will not just go away by itself.

In an American Broadcasting Company television documentary on noise which was entitled, "Death Be Not Loud," Jules Bergman observed, "America is getting noisier and noisier. If you're hearing more and enjoying it less you're in good company and there are plenty of reasons why. Noise is growing by one decibel a year. Nearly ten million Americans already suffer hearing loss from noise." Although the figures and data are open to some question and cannot be held to be absolute for all persons in all locations, the statement represents the type of "wake up America" cry which is part of the attempt to bring the noise problem before our citizenry.

#### A FRAME OF REFERENCE

The recurring use of decibel values in this and other writings calls for some means whereby a clearer understanding of the decibel can be maintained. To this end, Table 1 was compiled by referring to a large number of publications in addition to using some of the measures reported by the laboratory. The representations in the table must be understood to be "average" levels. In the case of trucks, many can be found to produce less noise than indicated in the table. Likewise, other trucks will be more noisy than the table indicates. This problem is related to the transient nature of sound. One fascinating aspect of studying the table is the rather incongruous groupings which occur. Appliances and machines which are functionally unrelated are found to be identical in the amount of noise they generate. Also, there are some surprises. Noise made by some household items is often found to exceed the noise of many industrial machines which have been known for many years to create dangerously great noise levels. The table is marked according to the levels which are generally regarded as border areas for hearing safety and irritation.

Individual differences will cause some persons to disagree, saying that a particular noise should not be described as irritating, although the chart



TABLE 1

## REFERENCE LEVELS OF FAMILIAR SOUNDS (dBA)

<i>Sound Level</i>	<i>Industrial &amp; Military</i>	<i>Community (outdoor)</i>	<i>Home (indoor)</i>
0—Threshold of audibility (Brownian noise)			
10—Barely detectable			
20—			Very faint whisper (20)
30—			Audible whisper (30)
40—			Quiet office (40) Quiet residence (45)
50—		Light traffic (50) Large transformer (53)	Average office (50)
60—  —Annoying (65)		Air conditioner (60) Near freeway (64)	Conversation (60)
70—			Fairly loud speech (70) Television audio (70) Noisy restaurant (70) Vacuum cleaner (74) Dishwasher (75) Living room music (76) Clothes washer (78)
80—Intolerable for phone use  —Ear damage possible (85)	Tabulator (80) Lathe (81) Cotton spinning (83) Milling (85) Cockpit—prop (88)	Diesel train (83) Diesel truck (84) Prop flyover @ 1000 ft. (88)	Loud singing (80) Garbage disposal (80)  Food blender (88)
90—Speech Interference		Motorcycle @ 25 ft. (90)  Rock drill (92) Compressor (94) Power mower (96)  Newspaper press (97) Farm tractor (98)	Loud shout (90) Subway (90) Cockpit—light plane (90)  Loud subway (95)
100—Very Loud	Heat furnace (100) Air Hammer (100)    Textile loom (106) Loom room (108)	Police siren @ 100 ft. (100) Snowmobile (100) Loud outboard (102) Jet flyover @ 1000 ft. (103) Loud motorcycle (105) Loud mower (105)	
110—  —Maximum under Federal law (115)	Riveter (110)  Compacter (116) Scraper-loader (117)	Diesel truck accel. (114)   Chain saw (118)	



TABLE 1 Continued

## REFERENCE LEVELS OF FAMILIAR SOUNDS (dBA)

<i>Sound Level</i>	<i>Industrial &amp; Military</i>	<i>Community (outdoor)</i>	<i>Home (indoor)</i>
120—Discomfort threshold	Oxygen torch (121) Armored personnel carrier (123)	Turbine generator (120) Thunder clap (120)	Rock music (120)
130—		Air raid siren (135)	
140—		Jet @ 100 ft. (140) .22 caliber rifle (140)	
150—		Jet, nearby (150) Shotgun (158)*	
160—	M-1 rifle (161)*	Toy cap pistol (163)*	
170—			
180—		Apollo liftoff, close (188)	
190— —Theoretic maximum for pure tones (194)*			

\*Note: The gunshot measurements and theoretic maximum are not expressed in "A-weighted" values.

indicates it to be in that category. They may further see that some sounds which are outside the "irritating" range are very irritating to them. This points up once again the confounding variability of the noise problem.

The format of the table is after that used by Dr. Alexander Cohen and his colleagues in their very informative treatment of the concept of *socioacusis*. This is a term coined by Dr. Aram Glorig which is advanced to describe the loss of hearing as a result of non-occupational noise exposure.

#### BREADTH OF THE PROBLEM

In essence, environmental noise, whether it is present in the occupational environment or in the recreational milieu, has an effect upon man at two levels. One level, physical damage to the ear, is very specific. The second level, annoyance, is quite general. Interestingly, both seem to combine to cause the untoward response called "Noise Damage."

#### 1. EAR DAMAGE

The ear contains thousands of tiny and delicate sensory cells which play a major role in the function of the hearing sense. It is well established that high intensity sounds have the capability of destroying these cells. This very

specific feature of the effects of noise has been the subject of continuing research for several years in our laboratory.

The ear shares the same fluid with the balance sense. To a large extent, the two senses interact. This is especially true when something goes wrong with one of the senses. In that event, the other may also show some effects of the problem. Ear damage and excessive stimulation of the ear structures can cause a collateral effect in the balance sense. This adds a new and dramatic dimension to the study of noise and its effects.

#### *Hurt Without Pain*

As the sub-heading implies, there are no pain receptors in the inner-ear—that portion of the hearing sense which suffers the brunt of destructively intense sounds. There is no sensation akin to the hurt felt after being cut or burned. To be sure, there are some means whereby the inner-ear can warn of impending danger, but these warning signs are quite subtle and are missed most times.

So, the favorite adage of children at play: "Sticks and stones may break my bones; but words will never hurt me!" does not hold. Words, or any other sound when delivered with sufficient force to the ears can and will



cause *irreversible destruction* to portions of the hearing sensory mechanism.

Located in the inner ear and protected by that dense shell of bone, the several thousand sensory receptor cells each play a major role in the normal function of the hearing sense. Yet they are in jeopardy when noise levels reach ever increasing new peaks.

The dangers to the ear posed by high intensity sound are not fully realized nor well appreciated by most people. The ear is, however, a truly miraculous product of creative genius which deserves to be protected from undue harm at all costs.

Noise can be disruptive, leaving one upset and feeling out of sorts. Noise is also destructive to those tiny and irreplaceable sensory cells in the inner ear. In regard to the danger of intense sound to the ear structures, there are several warning signs:

1. When, in the presence of high level sound, voice communication is extremely difficult or impossible, the sound level is dangerously high. One common environment in which this condition persists is the discotheque, which is filled with greatly amplified sounds generated by contemporary musical aggregations.

2. If, when leaving a noisy environment, the ears "ring" or "buzz," exposure has been excessive and there may have been some degree of ear damage, although it would normally be very slight in amount. It must be emphasized that a single exposure to high level noise will not create a severe loss of hearing, but repeated exposure will bring about an accumulation of effect and can grow into a sizeable problem.

3. Some persons notice a shift in their hearing ability after experiencing high-intensity noise exposure. If this does occur, the noise source should be studiously avoided. Although the hearing will usually return to normal after an appropriate rest period, repetitious exposure may result in permanent ear damage.

4. During some episodes of very high intensity noise exposure, pain may be experienced. This "tickle" or "piercing" sensation arises when the eardrum is overstressed by sound. It is not related to inner ear sensations where there is no mechanism for pain. There are a number of other features of such exposures to warn against them, but when the pain threshold has been reached, damage cannot be avoided, unless the exposures are for exceptionally brief periods of time, and are spaced far apart.

5. The hearing and balance senses share the same closet, the inner ear. In this regard, high level sounds may cause some effect in spatial stability and steadiness. If subjected to sounds which cause one to be unsure of his locomotive capabilities, or which make him downright dizzy and nauseous, the best advice is to avoid these episodes, for the sound may be causing ear damage as well as disrupting the balance mechanism.

6. After noise exposure, some persons become highly disagreeable and tense. This nervous reaction may be occasioned by sound which, if sufficiently long in duration, may be hazardous.

7. In a New York medical college, an experiment was conducted whereby women who had been found to be sterile were subjected to periods of very intense sound stimulation. The sound was so intense that the ladies complained of numerous problems, including the onset of headaches. Although the experiment apparently gave favorable results in that several of the women began to ovulate, there is some question as to whether the technique is advisable because of the duress it caused. This complaint of headaches is a rather nebulous one, because it is impossible to discern whether noise caused the condition singularly, or whether the headache was the product of a combination of effects. If one can lay certain types of headaches to specific events of noise exposure, the noise may be sufficiently intense to have an oto-damaging (ear destructive) capability.

When discussing the warning signs of noise exposure, wide latitude must be given to the interpretations, for man's complex nature makes it exceptionally difficult to nail down specific cause/effect relationships with some simple formula or list of hazardous conditions.

Individual differences in susceptibility to noise damage causes considerable problems. For example, there appears to be a sex difference. Most studies which have compared the hearing loss of male and female factory workers point out that the males as a group, demonstrate significantly greater hearing impairment than do women who work in the same area. This factor gives some additional ammunition to those who espouse the thesis of Ashley Montague that the female of the species is the superior animal.

It would be nice if one could pass off the above difference as being an artifact determined



by other factors. One convenient thought is that men, from boyhood, usually are exposed to greater amounts of sound than are women, thus, the differences noted are simply an accumulation of the occupational exposure and pre-occupational activities. Laboratory findings are also noting the sex difference in noise damage susceptibility in guinea pigs and it is known that the little boy guinea pigs have not been shooting cap pistols, firecrackers, small arms or engaging in other similarly noisy activities. Perhaps this difference is a systemic one, and will only be explained when the total reaction of the body to noise as a stressor is better understood. Could it be that the female is better built for stress?

Not only is there an apparent sex difference in noise damage susceptibility, but there are wide ranges within each sex group in the degree of damage which occurs in response to a given set of noise exposures. This has led students of the subject to summarize the condition as "toughness" or "tenderness" of the ears.

#### *Safe Limits*

The research literature is dotted with numerous accounts which ascribe to high intensity sound a deleterious effect upon the ear. Considerable effort has been extended in attempts to objectify noise exposure data and to arrive at realistic damage-risk criteria (DRC). These criteria have been advanced to prescribe the amount of permissible exposure to high intensity sound and have taken numerous forms. Some of them are quite complex and require thorough knowledge of the subject to be understood. This complexity stems from the fact that the noise exposure condition is a three-dimensional one: (1) The amplitude of the sound is an important consideration; (2) the frequency components are necessarily essential, for some pitches are more dangerous to the ear than are others; and the duration of exposure adds further intricacies to the situation. In order to consider all three dimensions, each one of which are capable of wide variations, one must construct a three dimensional model for damage risk. For simplicity, many have dropped the frequency (pitch) dimension by converting the measures to the "A" scale which takes into account the way in which a human ear might respond to the sound.

Because of medico-legal potentialities, the military and industrial organizations have pro-

vided the major impetus for study of destructive sound levels. It is becoming apparent, however, that the non-occupational environment is glutted with hazardous sound-generating devices which also justify further study and control.

Conceivably, the 75 to 85 dBA range for sound exposure provides maximum levels which are safe for all but the most sensitive ears. Some researchers still maintain that sound exposure between 50 and 65 dBA can cause concern for hearing health. A compromise level might be established at about 70 dBA. This means that a person who is exposed to a sound continuously, day in and day out will sustain no hearing damage, provided the sound is 70 dBA and no more.

There are probably no situations wherein a person receives this type of sound experience without some rest periods wherein the sound level is reduced to considerably lower values. It is, therefore, possible to allow an upper limit which is higher than the 70 dBA figure and still be within safe limits. This level is commonly given to be 85 dBA. An interpretation of the use of 85 dBA as the safe level would include the stipulation that the sound environment is comprised of widely varying sound levels, none of which exceed the 85 dBA level.

It should be noted that we are discussing safe limits for avoiding ear damage. Sound levels which were constantly at or about 70 dBA might well be irritating to some persons.

#### *Loss of Hearing*

When damage occurs to the sensory cells of the inner ear, the destruction is permanent in that these cells never can be replaced. Thus, when the ear loses some of its sensory structures, it is less capable of performing these complex functions.

There are a number of common problems which occur when one loses a portion of his hearing capability through noise exposure. (It should be noted that many of these conditions are present when the cause of the ear damage is not noise.) First, there is a general deterioration of the ability to communicate with others. Unfortunately, this type of hearing problem is not easily corrected by the use of a hearing aid. In fact, most hearing aid consultants would agree that few individuals with noise-induced hearing impairment have been found to use a hearing aid with any great degree of success. This in no way is an attempt to downgrade



the value of hearing aids, but it must be remembered that the scattered destruction in the inner ear caused by noise trauma is not easily correctable, even with the good quality hearing aids presently available. Certainly, a hearing aid should be considered if communication problems become troublesome. The aid manufacturers are hard at work designing instruments which more readily improve the total communication ability of persons with noise-induced hearing loss. One such development may afford additional help to persons with this characteristically difficult condition for hearing aids. Termed "front focus" hearing, it is in effect, a microphone designed to pick up those sounds which come from the front and reduce the response to sounds in the rest of the environment. This situation will provide some relief for those who are bothered by background noise when they are listening to a sermon or lecturer, for example.

Some of the specific problems encountered with the advent of permanent hearing loss due to noise exposure are both frustrating and embarrassing. As the hearing sense becomes dulled, the ability to distinguish between many sounds of the language decreases. This can lead to misunderstanding orders at work, or it can create those embarrassing situations which are popularly described in some humorous stories. For the person who is experiencing the problem, however, it isn't funny.

One of the complaints most often heard from persons who have begun to notice a hearing deficiency from noise exposure concerns the increasingly bothersome role background noise plays in their ability to hear. Normal ears can distinguish speech when the background noise is nearly as high as the speech signal itself (sometimes, one can even hear speech which is considerably softer than the ambient noise). With the deterioration of the sensory portion of the ear, however, this capability continues to erode until one finds the need to have the speech signal decidedly more intense than the background sound. This is often observable in the case of very old persons. They have a great deal of difficulty understanding speech if there is even a slight bit of background noise. This problem is no longer confined to the elderly, however. In recent years, many young persons have been found who experience the same problems because their ears have sustained a sizeable amount of permanent damage.

There is one additional major effect of noise-induced hearing impairment which is probably the most distressing—many important sounds are simply not heard. One who has sustained such a hearing loss may not be able to hear the telephone ringing in the next room. He may have a great deal of trouble hearing and understanding what children are saying, especially, when the children are speaking from a distance. Women's soft and high pitched voices may be impossible to hear and to understand. The old gent who complains that he cannot understand women may not be speaking only of the problem with the proverbial mystique. The end result of the difficulties in hearing sounds may be that the person becomes very downcast and withdrawn. Frustrated by the difficulties encountered in attempting to communicate with others, he may cast himself in the role of the outsider and begin to give up trying to be a social creature.

No recreational activity or occupational opportunity can be considered to be worth the mental agony experienced after the gradual reduction of hearing capability. Since hearing damage does not become immediately known to us as does an injury to the eye, it is often difficult to realize the potential grief one might experience as a result of not taking good care of the marvelous ears with which man has been entrusted.

#### *Temporary and Permanent Loss*

The existence of temporary threshold shifts (TTS) after exposure to loud sounds can be seen by testing the hearing of persons prior to and after noise exposure. The amount of reversible reduction in hearing sensitivity (threshold) is determined as the TTS. Any sound which is capable of causing a TTS of 30 dB or greater is generally regarded to be dangerously intense. Thus, exposure to such sounds should be avoided to the extent possible. Of course, one cannot go around giving himself hearing tests all of the time, so the previously mentioned damage-risk criteria were developed.

Repetitive or continued exposure to dangerously high sound levels will quite likely result in a permanent threshold shift (PTS). A TTS is totally reversible when one is removed from the noise and after sufficient time has elapsed for the ears to recover. When a person has sustained a PTS, however, the condition is irreversible and connotes the damage of those



sensory cells located in the inner ear. Once those cells are destroyed, there is no known mechanism for their regeneration so that repeated exposures to high level sound will result in an accumulation of destruction in the sensory cell population. This serves to increase the breadth of effect. The first indications of such an occurrence is the persistent reduction in hearing acuity for the audiometric high frequencies. When the PTS increases in magnitude, loss of hearing acuity for some of the frequencies below the high frequency region will occur.

Auditory pathology in the wake of intense acoustic stimulation is measured in a variety of ways. The most used method of observing the damaging quality of noise is the pure tone hearing test. With the use of specific conditions and a selected population, prevalence studies can detect the cause/effect relationship between certain types of noise exposure and the hearing loss measured in the population.

A very important event in the history of hearing surveys for this purpose was the publication of results obtained in the Wisconsin State Fair Study in 1954. This survey was taken by inviting visitors at the fair to have a free hearing test. It is well known that fair visitors are very responsive to the word "free," so the team of workers in this field took advantage of that quirk of human nature. Large numbers of people were tested and the results gave strong evidence of a correlation between occupation and the incidence of hearing impairment. Numerous surveys have taken place since that time, but the basic information has been quite similar, although additional populations have now been covered.

In the Fall of 1967, a colleague remarked that there were seemingly more cases of high frequency hearing impairment among the incoming freshman class at the University of Tennessee. He was making a comparison of the students seen for several years in an abbreviated hearing screening check of those who reported that they had some concern about their hearing. In the ensuing conversation a number of possible reasons for this observation were discussed. It was speculated that one quite believable possible cause was noise in the environment. It is not difficult to consider that present day young people are exposed to myriad high intensity sounds unknown to the youth one or two generations back.

One of the factors of aging is the decrease in hearing ability for high frequency sounds. This condition, called *presbycusis*, grows with the advancing years. The cause of *presbycusis* has been generally laid to the accumulative effects of all ear damaging influences during a lifetime, coupled with decreased blood flow to the ear region in those elder persons who are being troubled with arteriosclerosis. It is anticipated, however, that young persons between the pre-teen years and young adulthood should have normal hearing throughout the audiometric test frequency range with the occasional exception of the young person who has sustained a hearing loss for one of several medical or hereditary reasons. One indicator of the existence of inordinately high levels of environmental sound could be noted in many young persons who have sustained measurable hearing losses in the high frequency range.

At one time, high frequency hearing impairment among young persons was considered a relatively rare phenomenon. In recent years, several studies have indicated that high frequency hearing impairment in people below the age of 21 is increasing rapidly.

It was determined that a number of studies should be undertaken in an attempt to delineate the prevalence of noise exposure in a population of young persons.<sup>2</sup>

In the Spring of 1968, three studies were begun in the Knoxville, Tennessee City School System. In each study, a total of 1,000 students were surveyed for their hearing ability. Each study utilized children from only one grade level, so a combination of the studies provided a cross-section of three grades. The children were given a modified hearing screening test in order to determine the number of children who failed to demonstrate hearing within the normal range. Of interest to us was the condition of their hearing for the high frequency tones (above 2000 Hz.).

Of the sixth grade pupils seen, only 3.8% of the students failed the high frequency screening criterion (15 dB, based on the International Standard established in 1964). This figure rose to 11.0% for the ninth grade population and held at approximately the same level for the high school seniors (10.6%).

This apparent trend to greater failure rates in the older school children served as the impetus for similar hearing surveys of incoming college students. In the Fall of 1968, a total



of 2,769 incoming freshmen between the ages of 16 and 21 years were given the same modified screening test used earlier in the public schools. It was disconcerting to note that 32.9% of the students failed to meet the failure criterion. To confirm this astounding finding, a portion of the incoming class (1,410 students) was screened for hearing in the Fall of 1969. Though we fully expected to see the prevalence figures fall, the 1969 survey yielded an incidence of 60.7%. These percentages are shown graphically in Figure 1.

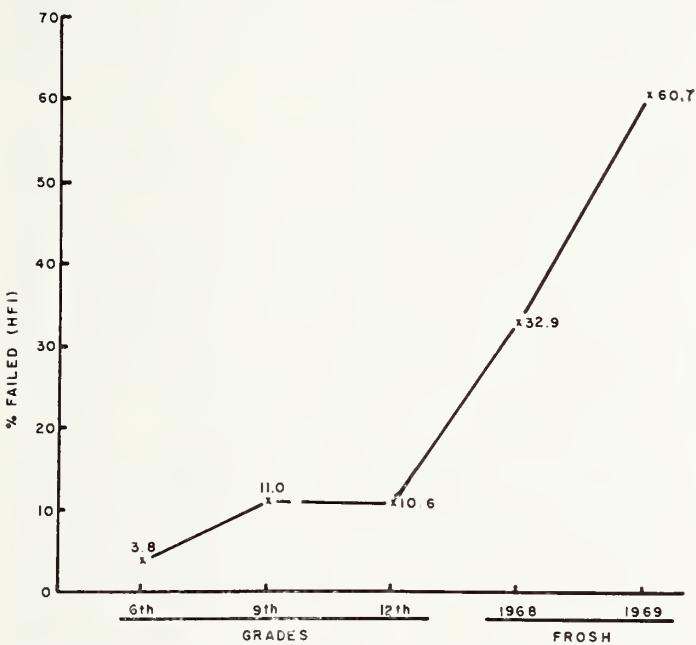


Figure 1. Percentage of students classified as having a high frequency hearing impairment. Note the upward trend in the figures, especially among college populations.

These data offer evidence, based upon measurements of hearing levels of 7,179 young persons under 21 years of age, that an undesirable trend toward a loss of high frequency hearing acuity of awesome proportions is being experienced. It must be emphasized that the greatest majority of the young people did not manifest serious hearing impairments. In fact, most of those who were found to have failed by a slight degree were totally unaware of any loss of acuity. The point remains, however, that the population from the age range tested should have shown a considerably smaller number with measurable high frequency impairment.

Further analysis of the data revealed that the males in the studies demonstrated considerably greater prevalence of hearing defect than did females. This observation is in concert with other research which has preceded these studies.

Of course, it is not feasible to attribute the rise in prevalence of high frequency hearing impairment to noise exposure alone. One can reason, however, that the popularity of high intensity recreational sound sources such as live rock music, sport shooting, motorcycling and sport racing coupled with the apparent rise in community noise levels should be considered to have a potentially distinct effect upon the auditory acuity of young persons.

These hearing test results are quite startling, especially when one realizes that the standard audiometric reference levels were established with the use of "young non-pathologic ears." It appears that a large segment of the students cited here certainly did not have non-pathologic ears as did the same age group only a few years ago with the standard for normalcy of youthful ears was established.

*Implications*

At this point, it is appropriate to allude to future considerations on this topic. It must be remembered that noise will not cause total deafness by itself. One could conjure up a wild set of circumstances, begun by some type of intense sound stimulation, wherein a person would develop an infection in the inner ear and lose his hearing. This would be a most rare occurrence; thus, it is best to look at noise as causing problems of somewhat less than total deafness.

It is not possible to provide explicit reasons for this serious trend toward high frequency hearing impairment in young adults, but the data presented do pose a severe problem for management. Although most young persons hired by industry are considered to be in good health and to be basically intact, it is quite possible that they already have a sizeable hearing impairment and the employers must be alert to this fact in order to protect the employee from further damage to his hearing from high level sound exposure in the work environment. A must for industry is the pre-employment hearing evaluation. This step makes sense from the standpoint of protection of the industry from being held responsible for a hearing loss which was, in fact, incurred prior to employment. The pre-employment hearing evaluation is also desirable in order to provide a mechanism whereby high risk employees can be recognized early and assigned to less noisy areas of the plant, saving them from the de-



humanizing agony of a progressive hearing impairment.

An audiologic consultant to the Environmental Protection Agency has stated: "Although presbycusis (old age deafness) is usually associated with the normal process of aging, nowadays it's thought that the continual din of our environment is probably a significant contributor." By knowing that the hearing sense dulls with the passing years, it is a cause of serious concern to see such a large number of our young people with measurable hearing losses so early in their life. When the progressive hearing impairment due to aging is heaped upon the losses some of these young persons have already received, dire predictions can be made that this generation of people will be considerably more troubled by their hearing when they reach the 60th year than are the current group of 60 year-olds. In point in fact, 14% of the male college freshman in the 1969 survey were found to have hearing equivalent to that of 50-60 year-old men.

#### *Laboratory Findings*

We have found, with the use of experimental animals, that high intensity sound with energy in a broad range of frequencies is capable of causing widespread destruction of the irreplaceable sensory cells in the cochlea. Using laboratory techniques, animals (guinea pigs, chinchillas, or rats) have been exposed to high intensity sound on a systematic schedule. After an appropriate waiting period in order to allow scar tissue to form in the inner ear, the cochlear tissues were dissected out of the temporal bone of the skull and were studied with the use of a high power research microscope. In normal tissue, the regular geometric configurations were noted as shown in Figure 2 and 3.

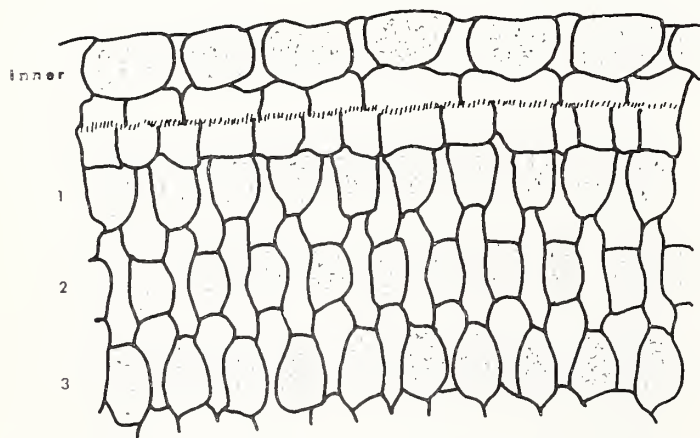


Figure 2. Sensory cell region of guinea pig shown in schematic form. Note geometric cell organization.

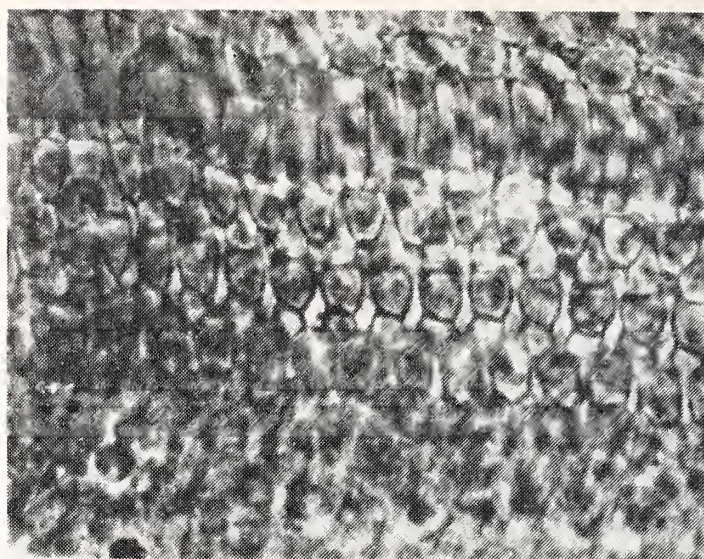


Figure 3. Phase contrast view of Organ of Corti as seen from above. Oc. 10, Obj. 100 (oil).

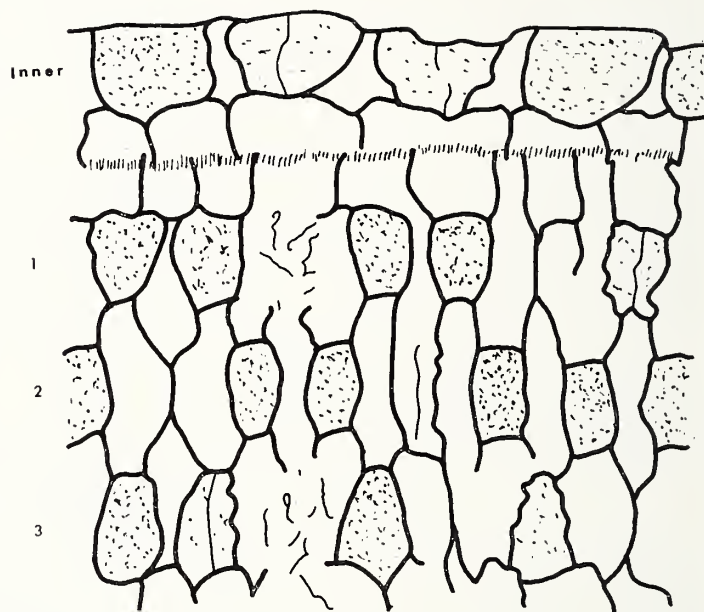


Figure 4. Schematic illustration of cochlear cell destruction as a result of intense sound exposure. There is no apparent pattern to the destruction. In the second row of outer cells is a scar, denoted by the "X" configuration.

In animals which have been exposed to high noise levels, the cell patterns are interrupted and damage is readily seen. In Figure 4 a schematic representation of abnormal cochlear tissue is shown. Note the interruption of cell patterning and visible damage. Several cells are bisected by a fine line, indicating the early stages of structure collapse. Other cells are completely missing, while scars in the form of an "X" fill spaces formerly occupied by active, healthy cells. Once a cell has degenerated, its loss is permanent in that there is no known process for the replacement of these highly specialized sensory cells.

Experiments were initiated to investigate the extent of anatomic damage to the ears of animals



brought about by such sounds as intense "rock" music. These experimental animals were presented sound stimulation approximating that measured in discotheques. After a relatively short exposure to high level rock music (Peaking at 122 dB), extensive damage to the cells in the inner ear was discovered. The analysis of damage for one of the experimental animals who listened to the music for a total of 88 hours and six minutes over a 57-day period in 27 different stimulus sessions was quite revealing. The region of the ear which responds to the frequencies around 1000 Hz. sustained a greater degree of damage than did the area of the inner ear which serves the higher frequencies. This observation indicates that destruction to the cochlear cell tissues is not singularly a high frequency phenomenon, although the early audiometric signs of noise damage occur with the loss of hearing for the higher pitched tones.

The actual tissue removed from one of the "rocked" guinea pigs appears in Figure 5. It is not difficult to note several areas in which sensory cells are totally collapsed, shriveled or missing. A composite view of normal and abnormal cells appears in Figure 6. The arrows point to two collapsing cells which appear to be shrivelling up like peas drying in the sunlight. This view gives a very interesting insight into the patterning of noise damage in the ear. Note that there is an apparently healthy sensory cell nestled between the two dying ones. This is often the case. There appears to be a very random effect of cell destruction in the inner ear, rather than there being widespread destruction of a single area of the cochlea.

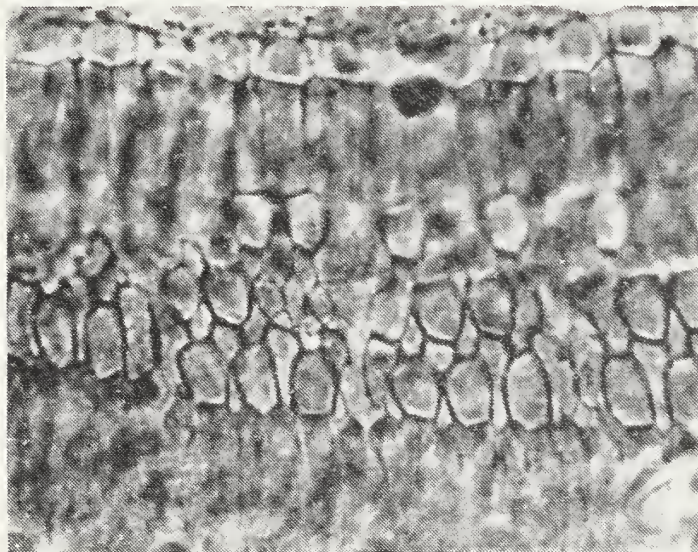


Figure 5. Photomicrograph of ear cells removed from guinea pig exposed to "rock" music. 19% of the sensory cells in this system were irreversibly destroyed.

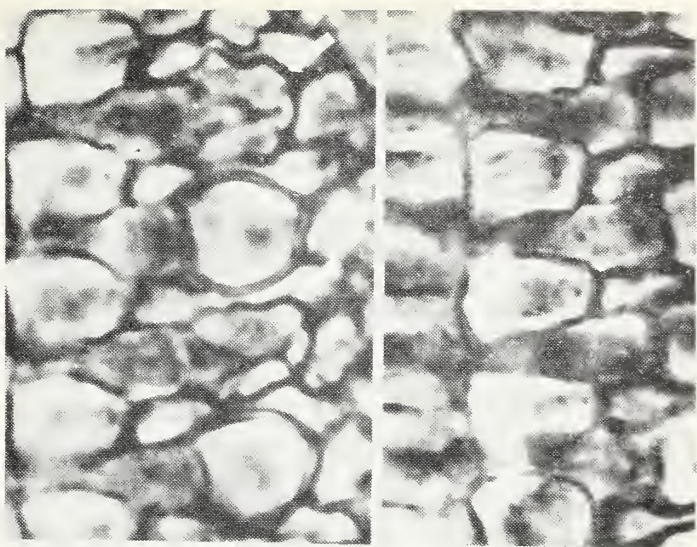


Figure 6. Composite photomicrograph showing undamaged cochlear cells removed from control ear and typical collapsed cells (arrows) removed from guinea pig ear after exposure to high level sound.

Additional studies were completed with the use of high amplitude contemporary rock music. The results were supportive of the findings reported with the animal which received over 88 hours of stimulation. Some of the animals were given less stimulation, and they were noted to have less destruction. Interestingly, there appeared to be fairly wide variation in the susceptibility to ear damage in the guinea pigs also.

An observation regarding the growth of damage in the low frequency ranges where there should be no destruction was gained by using restricted sound signals. Guinea pigs were exposed to signals which had a shortened frequency width (octave bands). Some animals were exposed to an intense low frequency band of noise. Others received the same amplitude of mid-frequency noise and a third group were stimulated by a high frequency sound.

The results of this study are in Figure 7 and reflect the percentage of cells damaged by the sounds. For the low- and mid-frequency stimulated animals, the damage appeared in the cochlea at about the expected places; i.e., at the top of the cochlea for the low frequency group and in the middle of the cochlea for those accosted by the mid-frequency sound. The high frequency sound, however, caused damage throughout the cochlea over a much more broad range than did the other two stimuli. In fact, the greatest amount of damage occurred in the low frequency area, rather than in the high frequency area of the cochlea. Destruction was more extensive than that caused by the low frequency stimulus. This is a very puzzling



observation and the reasons for it are not entirely clear. There are some acoustic reasons which might be used to explain the condition, but they are very complicated and beyond the scope of this article. Suffice it to say that noise can cause widespread damage in the cochlea, giving rise to the concern that greater destruction occurs in the ear in the wake of noise exposure than one might see in the results of hearing tests.

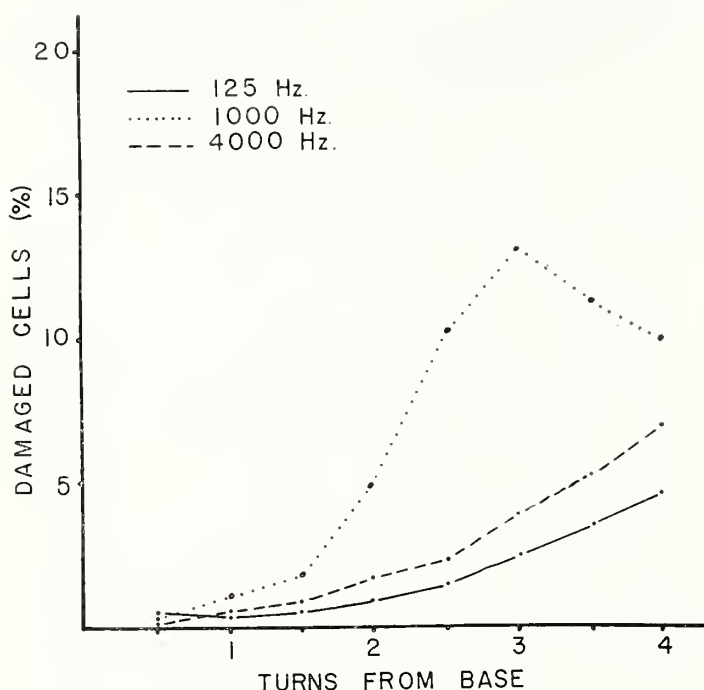


Figure 7. Percentages of damaged cells in ears of guinea pigs exposed to Octave-Band Noise. All of the sounds caused greater damage in region 4 (low frequency region). Mid-frequency sound (1000 Hz. band) was found to cause the most destruction.

If these data can be generalized to all mammal ears, the implication of these findings can be rather startling. Since noise stimuli create destruction throughout the cochlea rather than at a specific or circumscribed region, it must be assumed that pure tone audiometric tests do not signal the loss of cochlear integrity in the upper reaches of the cochlea (low frequency region). Thus, when one sustains a permanent hearing disability from noise exposure, such that the typical high frequency hearing impairment is noted, there may be even more prevalent cell destruction in the apical half of the cochlea . . . destruction which is noted with the use of conventional pure tone hearing testing.

It is quite alarming to find that widespread irreversible inner ear damage could be seen in the cochlea of experimental animals when they had been exposed to sound comparable

in amplitude and duration to the exposures sustained by a great many young people.

Caution must be exercised, of course when relating observations from experimental animals to humans. Especially is this true in the case of guinea pigs, for these little animals seem to be slightly more susceptible to sound damage than are humans. The inference is clear, however, that the typical discotheque sound environment is sufficiently intense to be extremely hazardous to the health and well-being of sensory cells in the inner ear.

A number of years ago, audiologists were attempting to determine if they could use a simple pure tone device which was capable of generating only one tone in hearing screening. The idea was that persons who were beginning to lose their hearing would usually show the first loss at about 4000 Hz.; therefore, a screening device set for that frequency would identify the person without the need for extensive hearing testing. This was one of those aggravating cases of a beautiful theory being smashed by an ugly fact. The idea didn't work and the single-frequency tests have generally fallen into disuse. One reason to rejoice over the demise of that screening technique is that even full-scale audiometry fails to indicate the extent of ear damage, much less a highly abbreviated method.

This cursory review of recent investigations lends considerable support to the thesis that high intensity environmental and recreational sounds pose a potential threat to the hearing of today's younger generations. The incidence indication surveys demonstrated that a rather high percentage of the young people tested were found to have a slight drop in hearing acuity in the high frequency region. Animal experiments indicated that intense sound stimulation caused quite extensive inner ear cell destruction in a large area of the cochlea. This had led to the speculation that audiometrically obtained measures of hearing acuity do not necessarily reflect accurately the presence and extent of cell damage.

By combining the findings of the hearing surveys with laboratory data, there is cause for concern. Although high level noise cannot be singled out as the only factor in this apparent "auditory epidemic," it must be considered to be a significant contributor to what appears to be a sizeable degree of auditory deficit in persons of an age group which only a few years



ago comprised the subjects for the current audiometric norms.

In fact, it seems that a normative study for the purpose of establishing or validating audiometric standards is virtually impossible at present in the major industrial areas of the civilized world because of damaged hearing within the population on which norms should be established.

### *Cardiovascular Response*

Recent studies have shown that one result of noise stimulation is a reduction in the blood supply of the inner ear region. Dr. Merle Lawrence<sup>3-5</sup> observed that the number of erythrocytes in the inner ear of an experimental animal can be noticeably reduced when noise is presented to the animal. He concluded that the reduction of blood supply in the vicinity of the sensory cells of the inner ear may account for temporary threshold shift. If, of course, the blood supply is cut off for long periods this temporary condition may revert to permanent damage.

Studies of the presence of blood cells in the capillaries of the auditory and balance sense end organ regions were completed. Several interesting anomalies were noted:

1. The number of red blood cells in the capillaries immediately under the auditory sensory cells are considerably reduced in the noise stimulated animals. The composite photomicrograph in Figure 8 shows how the contents of tiny capillaries appears to dwindle when noise stimulation occurs. The top area shows a capillary in one of the control animals which did not receive noise exposure. The bottom capillary photo is from the same region of the ear as that shown in the top part, but from an animal which received noise. Note that the capillary is nearly vacant. Those blood cells which are present in the noise exposed capillary do not appear normal.

2. An experiment with guinea pigs resulted in the males showing somewhat greater reduction than females in the presence of red blood cells after noise exposure. Perhaps this observation might offer a partial reason for the sex difference in susceptibility noted earlier.

3. It was noted that rats exposed to noise demonstrated a reduction of red blood cells in the capillaries of the vestibular region as well as in the auditory portion of the inner ear. It

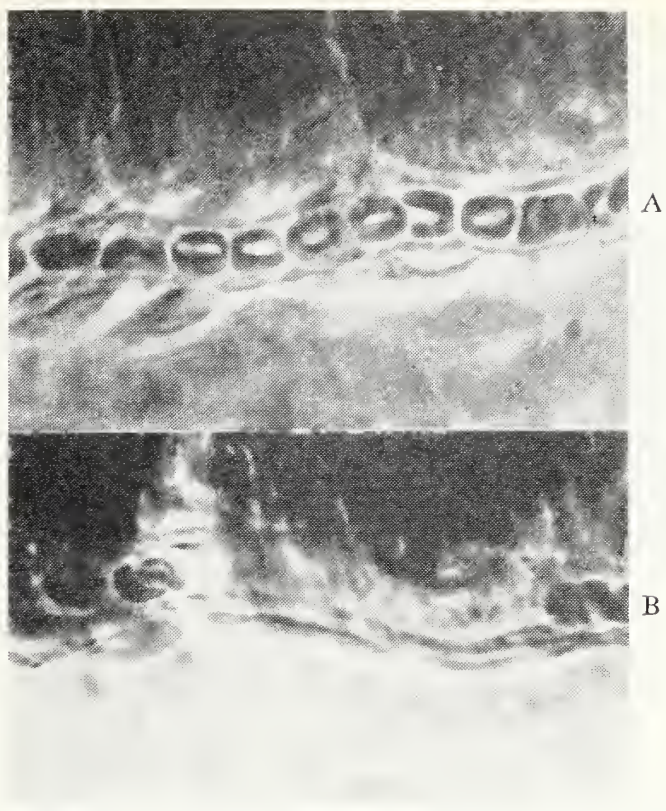


Figure 8. Comparison of capillary content of tissue taken from ears of rats. Part (A) from a control (non-noise exposed) animal. Note the large number of blood cells. Specimen (B) found in ear tissue of a noise-exposed rat. Number of blood cells are severely diminished.

is known that one of the common complaints of persons in noise is that they feel a sense of imbalance. They describe experiencing an unsteadiness which may be a vestibular side-effect of the auditory overstimulation and concomitant reduction in blood supply for the entire inner ear region.

The apparent mechanism for this reduction in blood cells noted in the inner ear capillaries is the development of masses in the walls of the capillaries in response to sound stimulation. These tiny areas of inflammation serve to thicken the walls of the capillary, thereby reducing the internal diameter of the passage. The result is the "choking off" of the capillary, creating sizeable gaps between red blood cells, bringing the normal flow to a halt in some of the capillaries. A greatly magnified view of these swollen capillary walls is given in Figure 9. Note that the internal diameter of the capillary is reduced to about one-half the normal size. Further, a blood cell can be seen trying to ooze through the swollen area with very little apparent success.

This response to noise stimulation has the



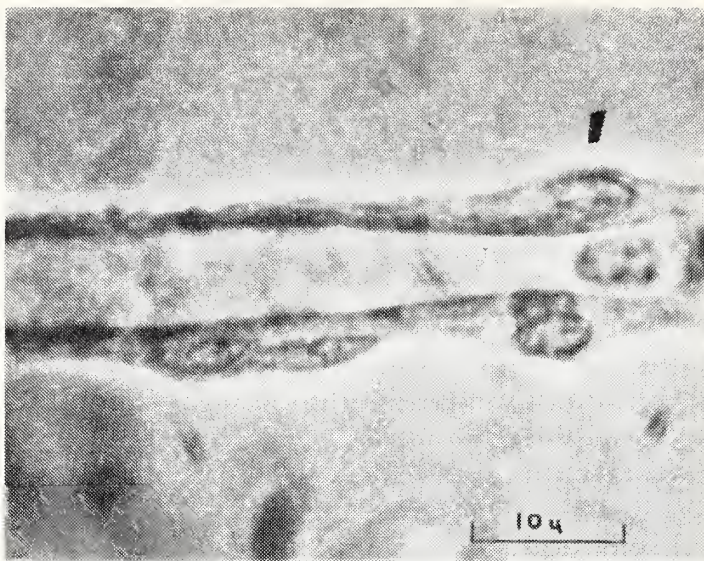


Figure 9. Highly magnified view of capillary taken from noise exposed rat. Note swelling in walls, causing reduction in internal diameter of capillary.

effect of interrupting the distribution of oxygen to the sensory cells and their supporting tissues. There are several suggestions as to the causes of the damage and disruption noted above:

1. *Physical force.* High intensity sound creates quite a stir in the fluids and tissues of the inner ear. These tiny and delicate membranes may yield to the force exerted by the sound so that damage occurs as a gradual weakening of the tissues from continuous manipulation by acoustic driving forces.

2. *Heat transfer.* One of the commonest health related causes of inner ear damage stems from illnesses with sustained high fever. The temperature rise causes sensory cells to die, leaving the individual with a hearing impairment. The suggestion has been made that tiny but significant forces within the ear created by an extremely high level sound can result in the generation of compartmentalized areas of temperature elevation. In these regions, the cells immediately in the vicinity of the rise in temperature are damaged.

3. *Structural damage.* Just as a hurricane will uproot trees and smash houses, sudden blasts of acoustic energy may tear and dislodge the tiny components in the inner ear. There also may be a weakening of the tensile strength of the tissues giving rise to permanent structural damage.

4. *Vaso-constriction.* Blockage of the delivery capacity for the oxygen-bearing blood cells may play a role in damaging the inner ear.

All of these factors in various combinations

may ultimately be found to contribute to noise-induced ear disability. Yet, future research may find that none of these are as responsible as some yet-to-be-discovered feature.

It is not fully known how many mechanisms of noise damage exist. There are two other suggested ones which will be grouped separately, for they are entirely speculative.

- (1) *Hereditary predetermination.* Dr. Ole Bentzen and his Danish colleagues at the State Hospital in Aarhus have noted an interesting group of physical features which they are attempting to relate to sound injury susceptibility. Labeled the *endo-mesodermal insufficiency syndrome*,<sup>6</sup> this group of symptoms are classified together because all of the affected structures arise from the outer layer of the developing fetus. Such conditions as triangular face shape, bluish sclera, skin pathology, consistent general health problems, frequent miscarriages and difficulty during birth, very thin or very coarse hair, and other similar anomalies are being found by Bentzen and his group to be related to possible susceptibility to hearing damage due to noise. The speculation is given that certain numbers of these physical conditions might prove useful as a prediction of persons who should avoid noise exposure. Much must still be done to prove the validity of this concept, but it deserves serious consideration and experimentation.

- (2) *Lack of rest.* All parts of the body demand periods of rest. The ear, however, is always "on" and will respond to the driving force of acoustic stimuli. In order to achieve any rest, the ear must be taken into a quiet environment whereby the stresses caused by constant sound bombardment can be put aside. With rising environmental noise levels, the places one can trust with quiet are becoming more difficult to find. For this reason, speculation arises that the ear tissues undergo slight, almost imperceptible modifications due to lack of rest which make them more likely to sustain damage in high level sound conditions. This feature may add a further partial explanation of the variation between persons with respect to their susceptibility to noise damage. Some of the lesser susceptible ones may have occasion to spend time in quieter surroundings than is the case with persons found to be more threatened with noise-related ear damage.

These last two factors are not presently supportable with hard research data, although the



latter concept is currently being brought to test in the laboratory.

*An Example Case*

The studies conducted in our laboratory and in many other fine institutions have given strong evidence that portions of the inner ear can be damaged rather extensively without audiometric indication that damage has actually taken place. In audiology clinics, one hears the common complaint from clients that communication is difficult, especially in noisy environments. Often the results of hearing tests are misleading, because the client may demonstrate normal or near-normal hearing for tones and for speech. Perhaps it has been a temptation (if not a tendency) to consider that the person is over-reacting to his hearing condition. Sometimes he is classified as oto-neurotic and his subjective observations are dismissed as being inaccurate.

Yet there is good reason to believe that the amount of damage to the ears will not be adequately reflected in hearing tests. Audiologists are becoming aware that the subjective experience of the hearing-impaired person is to be counted and believed. The conventional tests may prove to be inadequate as predictors of the success one might achieve in living with his noise induced hearing impairment. The following case history is offered to emphasize the problem in satisfying the needs of the person whose ears are affected by noise exposure.

A 72-year-old lady came to the clinic with the complaint that she could no longer hear well during her attempts to visit with friends and relatives. As shown in Figure 10 her pure tone test results indicated a slight-to-moderate hearing loss in both ears with the decrease in hearing ability most extensive in the high frequency response range. Her ability to understand speech in a quiet situation was excellent. In short, the test results did not indicate a significant hearing difficulty, in fact, it was felt that her responses were better than might be expected for a person of her age. Upon finding that she had operated a sewing machine in a noisy garment factory for many years prior to her retirement, it was decided to evaluate how well she could hear words when background noise was introduced into the situation. In the figure is a small table which indicates the results of that brief test. The S/N symbol indicates the relationship between the speech signal and the background noise. With a 50 dB S/N ratio, her ability to repeat the words was excellent (100%). As the noise was increased and the S/N ratio decreased, her ability to discriminate the speech sounds was gravely reduced until with a S/N ratio of 10 dB, she could repeat only 20% of the words. In this condition, a person with no ear damage

would be expected to respond accurately to 100% of the words.<sup>7</sup>

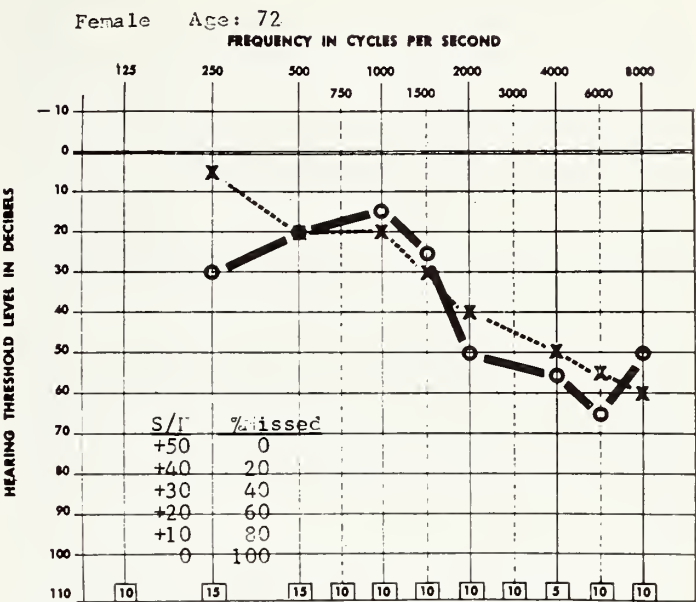


Figure 10. Audiometric test results for a 72-year-old female exposed to garment factory noise. In the lower left hand portion of the audiogram can be seen the results of a simple S/N ratio speech test (see text).

The conclusion was drawn that this patient had suffered extensive damage to the cochlea, but, routine audiometric tests did not indicate the gravity of her receptive communication problem. Therefore, it is emphasized that persons who have been exposed to intense noise for much of their work life may sustain rather extensive damage to the inner ear which will not be recognized by routine hearing tests. The hearing health community has begun to recognize this situation and to offer more comfort and understanding to these persons.

2. ANNOYANCE

It is well established that physical measures of sound in the environment can be made with exceptionally good reliability and accuracy. Recent additions to the acoustician's wares have increased his ability to partially overcome the transient and unpredictable nature of sound. Yet, a most important factor cannot be overlooked. The receptor of the sound is man. That fact creates another very knotty problem, for psychoacoustic factors (human psychological response to sound) come into the picture.

All people do not respond to sound in the same way. There is a wide range of human sensitivity to sound, therefore some perceive sound as being more intense than do others. Numerous psychological reasons account for ad-



ditional variation between persons in their responsiveness to sound stimulation.

The unit of sound amplitude (the decibel) can be well defined, but applying the decibel concept to noisiness is not an easy task. Psychophysical techniques have been developed with the understanding of the reality of individual variation with respect to stimulus response. The sensation created by a given stimulus, regardless of the sensory mode, is modified by the state of the entire person. For example, very irritable persons will, as a group, be more bothered by aircraft noise than will low-key individuals. Persons engaged in very precise activities will find aircraft flyovers more distracting than will laborers involved in gross tasks.

As an adjunct to continuous exposure to noise, the keen balances maintained in body physiology become disturbed. This disturbance is made known at the conscious level as the feeling of annoyance or stress. Stress induced by perpetual noise exposure has been listed as the cause of numerous physiological reactions.<sup>8-11</sup> Blood vessels constrict, giving rise to increased blood pressure. Heart rate increases. There is a tenseness of the musculature. Perspiration tends to increase. Adrenalin output rises markedly. The kidneys become more active. There is a notable change in liver function. The pupils of the eye dilate. Breathing rate increases. Changes in brain chemistry have been observed in laboratory experiments.

There is, in effect, a general bodily reaction to noise. This reaction contributes to feelings of fatigue, irritability or tension. In addition, physiologic imbalance as a result of noise exposure has been found to contribute to lowered productivity and increased worker errors in industry. Evidence is accumulating which would support the thesis that an inordinately high environmental noise level plays a large part in causing industrial accidents.

The annoying characteristics of noise play such a significant role that many students of the subject prefer to determine annoyance rather than loudness. Loudness is not fully satisfactory as a measure of the degree to which a sound will disturb persons. The attempts to design an annoyance measure have met with only limited success, largely due to the huge number of undetermined physiological factors, each of which may add its contribution to the effect a particular sound may have at a given time.

Our point of reference was to define noise as unwanted sound. One might well ask, "Unwanted by whom?", for human complexity does not allow for universal agreement on sounds as being acceptable or unacceptable.

Aircraft noise near a metropolitan airport may disgruntle many on the ground below, while others continue seemingly unaffected by the whir and whine of the jets. Even the theoretically soothing sounds of background music may perturb one who cares for total quiet.

In April of 1971, a conference was jointly sponsored by the State University of New York at Buffalo and Rachael Carson College. This meeting, called the National Conference on Technogenic Disease posed an interesting concept. It was pleasing to note that the planners of the sessions included a discussion of noise on the program. The term "technogenic diseases" is a most intriguing one. It provides a very vivid description of the effects the increasing number of noise sources around us can have upon several aspects of physical and mental function.

A medical dictionary defines "disease" as "literally the lack of ease; a pathological condition of the body that presents a group of symptoms peculiar to it which sets the condition apart as an abnormal entity differing from other normal or pathological body states." Here, the concept of noise as a source of technogenic disease can become confused for there is no *single* group of symptoms for *a* disease which can be attributed to noise exposure, *per se*.

When a person is exposed to unnecessarily loud sound over an extended period, numerous things can happen to him. His reaction may result in a number of internal problems with body physiology. He may become stressed, leading to interpersonal problems. His personality adjustment to the noise may not be adequate. Productivity and thought activities are likely to become disrupted. All or any of these untoward problems are potential after-effects of distressing noise exposure.

As an adjunct to continuous exposure to noise, the keen balances maintained in body physiology become disrupted. This disturbance is made known at the conscious level as the feeling of annoyance or stress. It generally holds that the annoyance characteristics of a sound increase with the loudness level of the sound. There is a frequency-dependent aspect as well. Those sounds whose energy is in the frequencies at and above 2000 Hz. are usually more annoy-



ing than are sounds whose spectrum contains mostly low frequency energy. Because of the great range of individual variance which we discussed earlier, these responses are highly unpredictable.

Numerous studies have been undertaken to observe the internal reaction man undergoes when he has been exposed to intense sound for long durations. Some of the results are still to be supported and strengthened by further research. Other data will be found to be inaccurate and will be either modified or discarded. The trend appears, however, to lead one to feel that there is potential for a very dramatic change in body function during noise exposure.

One of the indications of physiologic reaction to noise is the constriction of veins and arteries. In Germany, Dr. Gerd Jansen,<sup>8</sup> at the Max Planck Institute, has found that measurable decreases in blood flow through the veins and arteries of the hand can be noted very soon after the onset of loud sound. This reaction can also be seen by shining a strong light through the earlobe. As the light is directed to and through the lobe, noise is presented to the person under observation. Often, a gradual "whitening" will be noted. This is an indication that the blood supply to that area of the skin has been reduced.

These changes in blood flow signal a reaction of the total cardiovascular system. When the diameter of the blood passageways is reduced, back-pressure is set up causing an increase in blood pressure. This feature has also been measured in experimental subjects who have undergone specific noise exposure. When the available oxygen-carrying blood supply is reduced, breathing becomes deeper and somewhat more labored in order to provide more richly oxygenated blood to the body.

Other body reactions to noise stimulation include digestive system upsets which might in some cases lead to such severe symptoms as stress ulcers. Skeletal musculature tends to increase in tension and may effect motor control, especially in fine manual tasks. Dr. Jansen has also observed that noise stimulation causes dilation of the pupils of the eye. There have been some reports that inordinate pupillary dialation may cause a form of color-blindness which may offer some reason for concern about safety from a perceptual standpoint.

During the resting state, the skin offers a certain amount of resistance to the passage of

electricity from one point to another, which can be measured by a galvanometer. When something happens to cause a stress reaction, perspiration appears quickly on or near the surface of the skin. These briny beads allow the electricity to travel more efficiently across the surface of the skin, thus causing a noticeable deflection of the recording device on the galvanometer.

Endocrinologists have noted that the adrenal glands become quite active when noise is brought into a person's existence sphere. The many methods the endocrine glands can use to alter the chemical content of blood provides another area of concern relating to the physiologically damaging impacts noise may have on the body.

Essentially, the reaction to noise leads to a condition where the counter-relevant forces within the body compete for control, altering the emotions, the general health and stability of human organisms. Such reactions contribute to feelings of fatigue, irritability or tension. Continuous exposure to noise which has an irritating quality to a person cannot facilitate good health. It remains to be proved whether noise is as deleterious to health as some have suggested, but there is no support for any notion that noise is good for one. The results of the exposure may not culminate in a definable illness, but it adds stressing effects to the body, often without persons becoming consciously aware that they are being stressed.

#### *Stress and Ear Damage*

It is interesting to ponder the interrelationships which may exist between stress reaction and ear damage. It certainly is not wise to state that there is a direct cause/effect situation where ear damage will occur each time a person becomes upset. There is more than a chance correlation between the two aspects, however.

There are some confusing findings regarding the hearing status of some individuals who engage in extremely noisy occupations. Although the damage-risk criteria would lead us to believe that they should have remarkable hearing deficits, they do not. At this point, it is mere speculation, but eventually, it may be discovered that the less stressing a sound is, the less prone the recipient of the acoustic signal will be to develop a hearing shift.

There has been a general expression of concern for the hearing health of young persons



who engage in these musical flights into the never-never land of audio-euphoria. Yet, statistics indicate that rock musicians, as a group, do not exhibit hearing damage commensurate with the type of sound exposure they are receiving. It is well to remember that the high level sound is their baby! They have nurtured and produced it. The pulsing, throbbing, screeching expression of their innermost being comes back to their ears as if it were a balm (not bomb). If there is any bodily stress, it is most likely from unadulterated ecstasy.

There is probably some ear destruction occurring in these young people, but the additive effects promoted by incurring extreme internal distress are not there. Consequently, since they are not negatively stressed, their ears may not be placed in the same extreme jeopardy as would be the case if they were forced to endure a sound they could not tolerate. If this theory is ultimately borne out, it will be another great insight into the forethought which must have gone into the creation of the human body. This *pleasure principle* simply adds another dimension to the already crowded list of factors which have a bearing upon the human response to sound and the prospects of ear damage from immersion into high level sound environments.

### *Aging*

A subject of great medical awareness lately has been the geriatric patient. Suddenly, physicians have been confronted with elder citizens in larger numbers than ever before. Most of these persons present a complex set of symptoms which have motivated medical science to make concerted attempts to unlock some of the secrets of the aging process. According to Dr. Hans Selye,<sup>12</sup> a baby is born with a reservoir of stress-combating ability. Some are graced with more of this mystical capability than are others, therefore, some age more rapidly and expire sooner than others. This is, of course, an oversimplification of some very sophisticated research Dr. Selye has reported. The summary does, however, lend itself to a brief word about the contribution noise in the environment might be making in accelerating the aging process. It will be established in the next section that noise is a stressor. That being the case, the more a person is overstressed by noise exposure the more he is dipping into the precious reservoir of life-extending stress combating "potion." When noise stress is linked with all the other forces

which cause stress reaction in us, it seems on the surface to pale into insignificance. We must recall, however, that unwanted sound is one of the major components of our environment, and when we are repeatedly disturbed with the stimulus, it is to be regarded as more than a miniscule contributor to physical deterioration.

### *Noise as a Stressor*

Noise has long been known as an irritant. Unnecessary and uninvited sound gives rise to those physical reactions just discussed. Noise has been often treated as a stressor, but it was decided to determine whether noise was a stressor in a classic sense. Recognizing the brilliant and extensive work on stress by Dr. Selye and his staff, a group of rats were exposed to noise, and then were observed for stress reactions which had been described by Selye as (1) thymicolymphatic involution; (2) gastric ulcers; and (3) adrenal hypertrophy.

Small groups of rats were placed in a sound-treated enclosure and a broad-band noise was set for a level of 110 dB. The animals were left in the noise for a continuous period of 48 hours after which they were killed still in the presence of noise in order to avoid the possibility of spontaneous recovery upon being removed from the sound. One group of control rats were placed in a quiet enclosure for the same period. This is, of course, a rather extreme exposure in order to quicken the stress reaction. The two day period was patterned after the studies Selye conducted by placing rats in extreme cold for 48 hours. In that period, they developed the symptoms of stress alarm reaction.

Autopsy examination of the internal organ system of the noise exposed rats yielded convincing evidence in that every member of the group demonstrated at least one of the features in the stress reaction triad. Most of the animals manifested all three forms of the reaction. The thymus of noise-stimulated animals was affected in virtually all of the subjects.

In over half of the rats, duodenal stress ulcers were found, and many of the animals also had ulcers in other regions of their digestive system.

Normally, the adrenal glands are encased in a sheath of fat and are somewhat difficult to visualize. The noise stimulated animals presented no problem in this regard because that sheath of fat had been dissolved away and the adrenal glands were readily seen. The *adrenal*



*cortex* is known to secrete as many as 500 different chemicals in response to a signal from the *pituitary*. When the body is overstressed, the adrenal glands become excessively active, hypertrophy, and occasionally become slightly discolored.

A third group of animals were littermates to the experimental group. These cage controls were used to give indications as to how much the quiet group of animals reacted to the restrictions they experienced during their 48 hour tour of duty in the quiet chamber. No pattern of differences could be noted between the two control groups.

A word of caution is necessary at this point. It is tempting to project the results of these experiments into some form of "doomsday" prognostication, and some find the temptation irresistible. We must be reminded, however, that the majority of studies on the subject of noise as a stressor have been conducted with the use of non-human subjects, and therefore the projection to human reaction cannot be directly made. The most appropriate interpretation to make of the data is to realize that inordinately great exposure to noise has a potentially damaging effect upon vital physiologic processes and must be avoided if one is to remain free of the types of disturbance such exposures might cause.

### *Psychological Ramifications*

There will be little argument that mental state is greatly influenced by physical well-being. Therefore, if the internal functioning of the body has been tossed into a form of disarray as a reaction to sound stimulation, a person's psychological condition can be expected to undergo some modifications which may, or may not be overt. Psychological reactions can be related to the noxious aspect of the sound source, to the relative pleasure-displeasure an individual is experiencing at the onset of the noise, to the basic anxiety level of the person, or to his evaluation of his total situation at the time noise occurs.

Not many hard facts are available concerning the emotional concomitants of noise exposure. Allusions are frequently made concerning the frustrations, fatigue, vexations, irritations and immobilizing qualities of high level sound, but most of the projections are quite subjectively based. Dr. Jack Westman, a psychiatrist at the University of Wisconsin, has described the

role of noise as a disruptive influence in the home. These findings were a fortunate accident in a series of studies he and his colleagues had undertaken to learn more of family communication. The means whereby the data would be collected were voice-activated tape recorders. When a member of a family would begin to speak, the recorder would turn on automatically. Early in their data analysis, the Wisconsin researchers were quick to note that the tape recorders had been turned on by noises in the home far more often than by the spoken word. From this base, Dr. Westman made some observations on noise in the home: "... togetherness at the supper table is hampered by household noises and by the general tenseness fanned by the daylong din." He continued by relating that "we don't understand that noise makes us less efficient, less effective and more tense. Instead, we scapegoat. We take our tensions out on each other. Mothers yell at the youngsters. Parents bicker."

These factors point to the psychological side of the situation relating to our fears and annoyance reactions. A term, misfeasance, was discussed by Dr. Paul Borskey in a report on community attitudes toward various aspects of aircraft noise. The term was used in the study to describe those responses given by persons who had confessed to a fear of aircraft in general. This group was found to demonstrate greater concern about aircraft noise in the community than did those who did not fit into the group.

Sudden noises, such as slamming doors, shouts, gunshots or car backfires are more fearful because of the lack of warning received prior to the shock of the noise. After experiencing such a noise sensation, the internal workings of the body are usually noticeably upset.

Some persons whose psychological adjustment is not of the best will tend to react to such situations in bizarre ways. These noises often give rise to feelings of extreme anger or frustrations. Heinous crimes are reported to have been spawned by sounds creating in an individual the urge to kill or maim.

A British otologist, Dr. John A. Parr, speculates that "if repeated again and again, noise can ultimately cause a nervous breakdown."

### *Effect of Performance and Education*

This is a fruitful, albeit difficult area of study. The previously mentioned physiological and



psychological reactions may be considered to adversely affect motor performance and productivity. Research evidence in this realm is not conclusive, so that background sound is sometimes described as having a good effect. At times it seems to pose restrictions upon performance, and at other moments there seems to be no effect at all.

In tasks demanding great concentration and rapid reaction, noise interference has been demonstrated. It was noted that subjects who were monitoring complicated racks of dials and gauges were less vigilant when noise was introduced into the environment. Such disturbances apparently stem from noise induced lapses in attention or from the creation of a condition of brain over-arousal resulting in reduced behavioral control. These observations have been translated to indicate that work efficiency could be reduced by high noise levels.

In one study, sound-reducing ear plugs were found to increase worker efficiency by 12% in a weaving mill. In this case, not only were the workers protected from ear damage, but they rewarded management with better performance.

Much is to be learned about the relationship between noise exposure and quality of workmanship. One can intellectualize, however, that desirable work environments will optimize individual performance.

The effects of noise upon pupil performance has been a subject of some study with, understandably, differing conclusions. On one hand, some have observed that noise does not seem to hinder pupils in the classroom. Others have arrived at the conclusion that school work is negatively influenced. Again, intellectualizing would lead one to accept the latter view, simply from past experiences with interruptions caused by various noise forms.

It has been noted that students in a school outside London near Heathrow Airport, produced academic work well below the norm. A study of the intellectual and cultural background of the students gave no insights into such poor performance. It was assumed that the recurring sound of jets coming and going posed a significant impediment to the conduct of school business.

Of particular note is the fact that several public schools have been closed in recent years as a direct result of aircraft noise originating from major air terminals. Perhaps this is sufficient evidence that high level noise which seems to

be encroaching upon the educational units in the community has a deleterious effect upon some aspects of human performance and upon the learning process as well.

Certain noises, by their intensity, interest, factor, or rhythm must certainly be considered to be interfering agents which will be disruptive to normal educational situations.

## CONCLUSION

Although this discussion has been quite lengthy, it has not dented the surface of the great and bewildering noise problem. Few individuals are free of irritating noises in their environment. Most of the population is being accosted by noises which are excessively intense for normal mental activity. Many of those sounds are sufficiently powerful to threaten the health and well-being of the auditory mechanism.

The outlook is not totally negative and grim, however. In recent years several events have increased the hope that the noise will be reduced and that future generations will not be forced to undergo the incessant bombardment of unnecessary and unwanted sound.

At the Federal level, legislation has been put into effect which is intended to quiet the work environment. Recently, the Noise Control Act of 1972 empowered the Environmental Protection Agency to begin an assault on non-occupational noise sources by developing and enforcing standards for noise emission of appliances, tools, motors and certain vehicles.

State and local governments have explored the need and effectiveness of noise legislation to pick up where the Federal laws leave off.

Perhaps the most encouraging sign of all is that individual citizens have become much better educated with respect to the noise problems about them. They are now aware that things do not need to be loud. With this knowledge, they will not continue to tolerate the noise-makers which only a few years ago had received mute acceptance.

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# *The Impact of Changing Pesticide Usage On the Medical Community*

ANNE R. YOBBS, M.D.\*

The use of chemical substances has been increasing steadily in the modern world, filling man's physical environment with a myriad of substances which are potentially toxic to man himself or to parts of his environment. In trace amounts in the human body, some substances have no demonstrable effects, and others are essential to life; in larger amounts, these same substances may be toxic.

Similarly, the number and usage of pesticide products has increased significantly during the last 30 years with the availability of organic chemicals for convenient, effective, and economical pest control in a wide variety of situations. Benefits have included increased food production and control of disease vectors and nuisance pests. At first, relatively little effort was directed to safe application and controlled use of these chemicals, and knowledge of possible harmful side effects did not keep pace with the development of chemical pesticides. Beginning in the late 1940's, evidence developed that certain chlorinated hydrocarbon compounds, such as DDT, accumulate in fatty tissues of fish, birds, other wildlife, and man. Later studies showed that excessive concentrations of these pesticide residues have adverse effects on reproduction, physiology, and behavior in some birds and represent a threat to wildlife. The hazard to future generations of man is not known, but results of controlled experiments in laboratory animals indicate a need for further investigation.

The general use of DDT in this country was cancelled by the U.S. Environmental Protection Agency effective December 31, 1972, following several years of intensive review and inquiry into the environmental and human health hazards related to the use of this chemical. This administrative action will necessitate a change to other available chemicals, such as organophosphates and carbamates, which have been marketed for a number of years. They are more

easily broken down in the environment and in biologic systems and therefore pose less risk of long-range contamination and buildup in the environment. However, many of the chemicals which will be substituted for DDT are highly toxic and present greater short-range acute hazard to the user and to others coming into direct contact with them. Since these replacement chemicals are less stable, more frequent application will be required to maintain the same level of pest control, thereby further increasing the hazard—particularly to untrained users.

Project Safeguard, an intensive educational program directed to farmers at risk in 14 States, is a joint effort of the U.S. Environmental Protection Agency, U.S. Department of Agriculture, and the State Cooperative Extension Services. The target States include those Southern and Southeastern States where the greatest use of DDT has occurred in recent years in the treatment of their major crops, cotton, peanuts, and soybeans. A special effort is also being made to alert physicians and emergency health personnel in these States to the potential problem and to review diagnostic and treatment measures with them.

Everyone engaged in health delivery should become familiar with all aspects of pesticide poisoning including prevention, populations at risk, signs and symptoms, diagnostic confirmation, and treatment. Review of all pertinent details is not possible within the space allotted, but a few salient points should be emphasized.

Pesticide poisoning is preventable if the user reads and observes all label instructions regarding usage, storage, and disposal. At risk are not only the farmers or applicators, but also their helpers and families.

Pesticides may be absorbed by ingestion, by inhalation, or through the intact skin as a result of negligence, accident, or deliberate action. Absorption of certain organophosphates is at least as effective following dermal exposure as after ingestion. Dermal exposure is of major importance in occupational poisonings, accounting for 77.5% of the cases of occupational poisonings by industrial and agricultural chemi-

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cals in California in one year (Kay, 1964). There is wide variation in the toxicity of individual compounds within a given group of pesticide chemicals such as the organophosphates. Malathion has a low toxicity, while Temik, TEPP, and ethyl parathion have considerably higher toxicity. Both the organophosphates and the carbamates inhibit acetylcholinesterase; organophosphates are permanent inhibitors, carbamates reversible inhibitors. Illness results from accumulation of excess acetylcholine and, while similar, may vary in intensity from compound to compound and group to group. Signs and symptoms include sweating, headache, giddiness, miosis, tearing, increased salivation, excessive respiratory tract secretions, nervousness, blurred vision, weakness, nausea, vomiting, abdominal cramps, diarrhea; subsequent symptoms include chest discomfort, cyanosis, papilledema, muscle twitches, and, in most severe cases, convulsions, coma, and loss of reflexes and sphincter control. Miosis is commonly present, but mydriasis may occur; in either, pupils are non-reactive (Hayes, 1963). If symptoms begin more than 6 hours after the last known exposure, the illness is probably due to some cause other than pesticides. The end of exposure may be difficult to determine, especially if the patient does not practice good personal hygiene or continues to wear contaminated clothing or protective equipment.

Rapid delivery of correct treatment in suspected cases of pesticide poisoning is of primary importance. Treatment consists of *Support*, *Decontamination*, and *Specific Antidotes* where available. Support therapy includes, most importantly, administering artificial respiration when indicated, while maintaining a free airway. Mechanical means may be used if available; if not, mouth-to-mouth resuscitation should be followed. Oxygen should be administered when cyanosis or severe respiratory difficulty is present. Sedatives may be used with caution to combat hyperexcitability or convulsions; sodium phenobarbital is the drug of choice because of its rapidity of action but should be used with care when there is respiratory impairment. After continuation of respiration has been assured, decontamination of the patient should follow promptly to end exposure to the toxic chemical. Depending on the circumstances of exposure, decontamination may include one or more of the following: removal of contaminated clothing, washing of skin and hair, rinsing of eyes,

gastric lavage or induction of vomiting, and eventually evacuation of the intestinal tract.

Specific antidotes are not known for all pesticides, but antidotes of considerable value are available for use in organophosphate poisoning. They are safe enough to administer cautiously on the basis of symptoms before the diagnosis is firmly established. Favorable response to the antidote helps confirm the diagnosis. (Absolute confirmation requires laboratory analysis of proper samples to prove that a sufficient amount of the chemical was in the body at the time of onset of illness.)

Atropine sulfate is a physiological antidote which does not affect the inhibited cholinesterase but blocks the action of acetylcholine on parasympathetic receptors. Atropine sulfate should be administered to adults in doses of 2-4 mg intravenously as soon as cyanosis is overcome and should be repeated every 5-10 minutes until signs of atropinization appear. In all cases where atropine treatment is indicated, a mild degree of atropinization should be maintained for 24 hours and for 48 hours or more in severe cases. Doses for children should be proportional to weight, about 0.05 mg/kg body weight. Patients poisoned by organophosphates show an unusual tolerance to atropine because of the accumulation of excess acetylcholine.

Pralidoxime chloride (2-PAM chloride) (Protopam<sup>R</sup> Chloride, Ayerst Laboratories) is a specific antidote for poisoning by organophosphates, acting to break the bond between the enzyme and the pesticide metabolite. Treatment is more effective if started early and should always be given in conjunction with atropinization. The dose is 1 g for an adult and 0.25 g for infants, given slowly and preferably by infusion for 15-30 minutes. If infusion is not practical, the dose may be given slowly by I.V. injection as a 5% solution in water over *not less than 2 minutes*. If the first dose produces improvement, it may be repeated after an hour. *2-PAM is contraindicated in suspected carbamate poisoning.*

Patients who require treatment with antidotes should be watched continuously for not less than 24 hours, because serious and sometimes fatal relapse can occur due to continuing absorption or dissipation of the effects of antidotes.

A pamphlet entitled "Diagnosis and Treatment of Poisoning by Pesticides" developed by

(continued on p. 733)



## HISTORY

This 71-year-old lady had complained of transient

episodes of dizziness for approximately six weeks. She had noted no lateralizing neurological signs to suggest transient ischemic attacks and on physical examination her extracranial cerebral vessels were normal. The remainder of her physical examination, chest x-ray and routine laboratory work were normal. Her electrocardiogram revealed an important clue to the etiology of her symptoms.

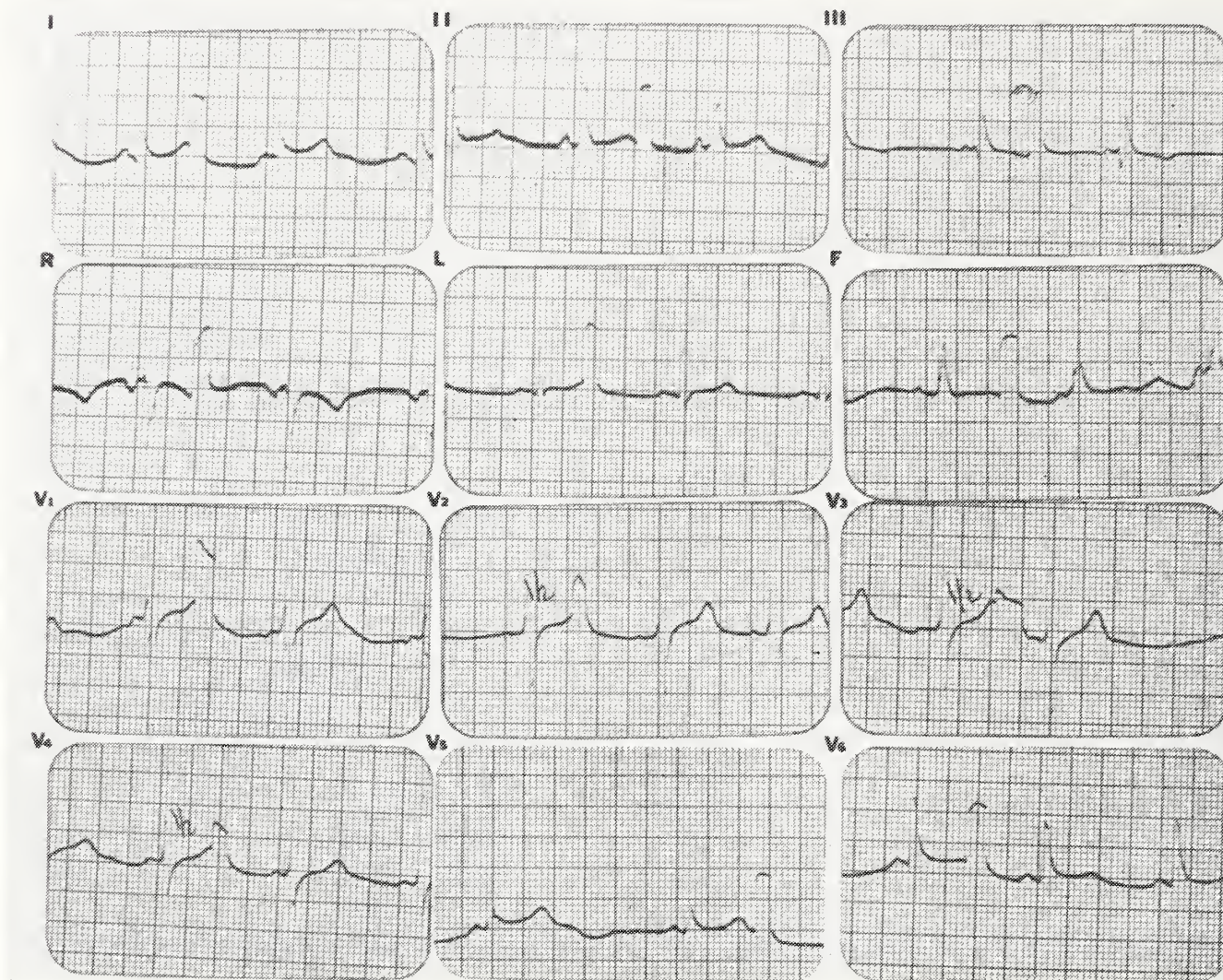


FIG. 1

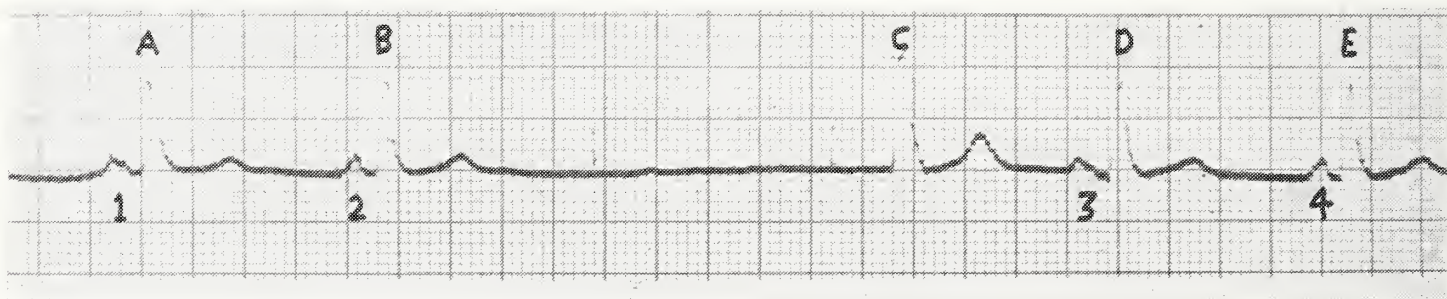


FIG. 2

## DISCUSSION

The routine 12 lead electrocardiogram is essentially normal. (Fig. 1) Slight notching of P waves could be interpreted as evidence of atrial disease although as an isolated observation this is probably overinterpretation. The rhythm strip however, demonstrates a distinct abnormality, with sudden interruption of both

atrial and ventricular activity. QRS complexes A, B, D and E are related to their preceding P waves. The interval between P waves 2 and 3 is an exact multiple of the basic P-P interval and suggests that the basic rhythmicity of the sinus node continued although the stimulus did not enter the atrium. QRS complex C is a junctional escape beat following the long pause. Such a phenomenon is referred to as "exit block," a conduction disturbance in this case

From: St. Thomas Hospital, Department of Cardiology, Nashville, Tenn. 37203.



between SA node atrium. The rhythm strip (Fig. 2) thus demonstrates a form of "sinus arrest" and suggests the patient's problem is part of the clinical spectrum of the so called "sick sinus syndrome." Intermittent sinus arrest, profound sinus bradycardia and paroxymal supraventricular tachyarrhythmias constitute other aspects of the syndrome. During follow-up the patient experienced more frequent and more disabling episodes of sudden bradycardia but has done well since implantation of a permanent demand pacemaker.

Final EKG diagnosis: Intermittent sinus node exit block with sinus arrest.

Final clinical diagnosis: "Sick sinus syndrome" with paroxymal symptomatic bradycardia.

HARRY L. PAGE, JR., M.D.  
W. BARTON CAMPBELL, M.D.  
Co-Directors

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The Impact of Changing Pesticide Usage  
(continued from p. 731)

Project Safeguard discusses pesticide poisoning in more detail and is available in single copies on request to the author.

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**from the  
executive  
director**

**J. E. BALLENTINE**

# **MEDICAL DIGEST**

**NEWS OF INTEREST TO DOCTORS IN TENNESSEE**

**TMA DELEGATES ELECTED TO HIGH OFFICE IN AMA . . .** At the annual meeting of the AMA in New York, June 22-29, two TMA Delegates were elected to high office . . . Vice Speaker Tom E. Nesbitt, M.D., Nashville, was unanimously elected without opposition to be Speaker of the House of Delegates . . . John H. Burkhart, M.D., Knoxville, was re-elected for a second three-year term to the Council on Constitution and By-Laws . . . TMA Delegates were active in all phases of the business of the House of Delegates. The session broke all records for volume of business and work to be done. A report on principal actions will be abstracted in this page in a future issue of the Journal.

\* \* \*

**TMA AT WORK . . .** The past three months have been among the most active periods for the Tennessee Medical Association . . . April saw a successful annual meeting conducted in Memphis. (A complete resume of these actions were contained in the June issue of the Journal.) . . . The Tennessee Foundation for Medical Care, Inc., Board of Directors, conducted an important meeting pertaining to PSRO . . . In May, the TMA Committee on Hospitals met with the Tennessee Hospital Association in a busy meeting . . . June was an active month with the Committee on Scientific Affairs conducting a two-day meeting to plan the 1974 scientific session and a second day meeting with representatives of the specialty societies to work out plans and programs for next year . . . A meeting of the Liaison Committee to Medical Schools . . . The Interprofessional Liaison Committee conducted a busy session, and the six-day American Medical Association's meeting was one of the busiest on record with an active TMA Delegation at work . . . July included a meeting of the Committee on Medicine and Religion.

\* \* \*

**TMA RESOLUTIONS ACTED UPON BY AMA HOUSE OF DELEGATES . . .** Three resolutions, adopted by TMA's House of Delegates directed that similar resolutions be submitted to the AMA House of Delegates . . . Resolution No. 5, titled Phase III Fee and Wage Controls, called for the AMA to continue to express to the President of the United States dissatisfaction and concern at the discriminatory action in wage and fee controls by the Federal Government. The action taken on the resolution merged it with several similar resolutions and reports stating that the AMA is continuing vigorously to pursue every practical means to eliminate such discrimination. This action carried out the intent of TMA's resolution.

Resolution No. 6 sponsored by TMA called for hospital records to be available only to hospital medical staff, unless written permission is otherwise granted by the patient and his physician. The resolution had considerable support in the Reference Committee. TMA's resolution was similar to Report X of the AMA's Board of Trustees. The House approved



Report X pointing out that hospital records are the property of the hospital and not of the physician or the patient. The Reference Committee stated that hospital medical records should be available to medical record personnel, nurses and other allied health persons who have a legitimate need for the information contained therein. TMA's resolution was not adopted.

Resolution No. 7 submitted by the TMA Delegates on the subject of actions by Aetna Life and Casualty Insurance Company was referred to the Council on Medical Service for further study and action. The Reference Committee took note of the problems in Tennessee with third party carriers and urged steps to continue in efforts to eliminate problems still being experienced. The resolution called for action already under way by the Council on Medical Service.

\* \* \*

**TMA REPRESENTATIVES MEET IN WASHINGTON, D.C. ON PSRO ISSUE . . .** TMA representatives were among leaders from 39 state medical associations who met with AMA, congressional and HEW officials to define the role large state medical associations may play in Professional Standards Review Organizations (PSRO's). They sought support for the concept of statewide PSRO umbrella organizations which could provide requested services to local PSRO areas. Although the PSRO law does not preclude statewide umbrella concept, there has been increasing evidence that regulations might rule them out . . . There was virtual unanimous agreement that an important role could be performed on a statewide basis—a role that could assure effectiveness of local PSRO's . . . PSRO Director, Dr. William I. Bauer, said intent of law is that statewide PSRO's be limited to states with small populations, but conceded that the law itself does not make this distinction.

\* \* \*

**THE JOURNAL IS A "BRIDGE" FOR PHYSICIANS IN TMA . . .** Little indicators sometime add up to all-important-conclusions . . . Some physician members say that they read the Journal from cover to cover each month. Others select scientific articles, editorials, the yellow pages and other sections to read. It is not expected that all members read the Journal, but it is a good idea to scan each issue for information of interest to you. You will be surprised how many items are important to your practice, that keep you up-to-date on economic and legislative issues. Over a year's time valuable information can be obtained . . . We hear a great deal about communication gaps in our fast-moving and fast-changing pace, and such gaps are of real concern. Make The Journal a "bridge of communications" between you and your Tennessee Medical Association and between you and your colleagues throughout the State.

\* \* \*

**SPECIALTY JOURNALS REMAIN FREE AMA MEMBERSHIP BENEFIT . . .** The AMA Board of Trustees has reversed a previous action that would have put specialty Journals on a subscription basis. In announcing that the AMA will continue to distribute the journals to dues-paying members without charge, the Board of Trustees said the decision was made in response to views of the membership and as a result of a management reappraisal of the costs.

\* \* \*

**PSRO LAW CHALLENGED . . .** The American Association of Physicians and Surgeons has filed suit in Federal Court challenging the constitutionality of the PSRO law. The suit states that the law empowers agents of the Federal Government to interfere with and overrule the professional judgment of physicians as to what is medically necessary for their patients.



**public  
service**



## **COMMUNICATIONS • LEGISLATION**

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**MEDICARE TO REVISE WORDING ON EXPLANATION OF BENEFITS FORM . . .** Mr. James R. Willis, program officer for the Atlanta Regional Office of HEW has informed TMA that carriers for Medicare (Equitable in Tennessee) have been notified to amend the wording regarding explanation of benefits with the next printing of the form used. Considerable complaints have been made regarding the current method of explanation and as a result, the following notification has been issued:

"We have had a number of comments from physicians over the past months concerning the wording on Medicare's explanation of benefits notices explaining reductions in charges. Many physicians felt that the use of such terms as "reasonable charge" or "allowed charge" intimated that there had been an overcharge or an unreasonable charge. While it was not the program's intent or desire to cause such misunderstandings, I know that such was the case in a number of instances.

I am happy to be able to tell you that the Bureau has recently revised the format of the explanation of Medicare benefits and I feel certain that the new approach will eliminate the possibility of confusion in this area. Carriers have been instructed to modify their systems to enable them to use the new EOMB with their next printing of the form.

Basically, the form has been extensively rewritten and reorganized to help the beneficiary better understand how the benefit was computed. The columns have been numbered and several of the captions have been revised for clarity. Explanatory statements have been expanded to furnish approved language for a greater variety of services and circumstances. The front of the form will contain, among other items, the following captions:

1. Services Were Provided By.
2. When.
3. Amount Billed.
4. Amount Approved.
5. Explanation of Any Difference Between  
Columns 3 & 4, Medicare Does Not Pay For:

When the "Amount Billed" and the "Amount Approved" amounts differ, a reference will be made to explanatory paragraphs on the back of the explanation of Medicare benefits form. These explanatory paragraphs are as follows:

**4. HOW MUCH DOES MEDICARE PAY**

Medicare pays 80% of the charges in Column 4 above the annual deductible. The annual deductible is now \$60. For calendar years before 1973 it was \$50.

Medicare pays 100% of the charges in Column 4 for radiology and pathology services from a physician while you are a bed patient in a qualified hospital.

Medicare also pays 100% of the charges in Column 4 for laboratory



services if the laboratory has agreed to accept a negotiated rate as payment in full.

5. IF PAYMENT NOT BASED ON THE FULL AMOUNT BILLED

The amount Medicare may pay under law is limited to the lowest of

- a. Customary charge, i.e., the charge made by the physician or supplier in 50% of his billings during the base year.
- b. Prevailing charge, i.e., the charge made 75% of the time by other physicians or suppliers for similar services in the area during the base year.
- c. The amount permitted under the limits established by the Cost of Living Council.

Hopefully, the revision will eliminate the potential for misunderstandings experienced in the past."

\* \* \*

**PLACEMENT SERVICE EXPANDS EFFORTS . . .** Even though Tennessee ranks 1st in the Southeast and 7th nationally in the production of M.D.s, the request from physicians and communities across the state is "please find us another doctor." This call comes to the Tennessee Medical Association continually, primarily from the more rural areas of the state.

Fulfilling this request has become increasingly difficult. The Tennessee Medical Association has for a number of years maintained a Physician Placement Service. Serving as an intermediary between physicians seeking practice locations and communities with opportunities available, the Placement Service has played a vital role in placing doctors throughout the state. In addition, a full page is devoted each month in this JOURNAL to the Placement Service. A new listing of both PHYSICIANS WANTED and LOCATIONS WANTED can be found each month in the JOURNAL. The TMA JOURNAL recipients are encouraged to take advantage of this free service, and many do. The problem remains that the demand for doctors outweighs the supply.

In recent months and in months to come, the Tennessee Medical Association through its Placement Service, is making a special effort to increase the supply of physicians to meet the demand we now have. The incentive for this effort has come as an outgrowth of the study conducted by the Tennessee Higher Education Commission on Medical Education in Tennessee. The study pointed out among many recommendations that physicians nationwide tend to locate in states where they receive their medical education, but more specifically where they receive their graduate training. At present, there are approximately 1,000 interns and residents training in Tennessee hospitals. The Tennessee Medical Association, in cooperation with these hospitals and the Tennessee Hospital Association are making a special effort to retain as many of these 1,000 physicians as possible.

An attractive brochure entitled "Tennessee . . . A 'Natural' Place to Practice Medicine" has been developed to use in recruitment, not only for the 1,000 residents and interns, but of any other physicians who have expressed a desire to establish a practice in Tennessee. The brochure in addition to outlining the boundless opportunities available to the Medical Practitioner, depicts in vivid color many other advantages such as the educational, recreational and cultural surroundings.

This brochure is being distributed through 17 hospitals across the state with intern and residency programs. In addition, on a quarterly basis a flier listing a sample of current practice opportunities available in Tennessee is distributed directly to the 1,000 interns and residents with a letter encouraging them to consider Tennessee as their place to practice.



A 51-year-old white male, was admitted to the hospital because of a thirty pound weight loss and right hip pain. The pain was constant and exacerbated by motion, awakening the patient at night. Other symptoms included mild anorexia, tenesmus and a decreased caliber of stool. There was a past history of duodenal ulcer with upper GI bleeding and hematochezia in 1970. The patient has had subsequent periods of epigastric discomfort. There was no history of alcoholism, and the family history was negative for malignancy.

On physical examination, in the abdomen there was generalized upper abdominal tenderness and mild guarding, especially in the right upper quadrant. The liver was slightly tender and firm and moderately enlarged. No other masses were felt in the abdomen. On the rectal examination, the prostate was slightly enlarged but smooth.

X-ray examinations consisted of: Chest (Figure 1), Upper GI Series (Figure 2), and Lumbar Spine and Pelvis (Figure 3).

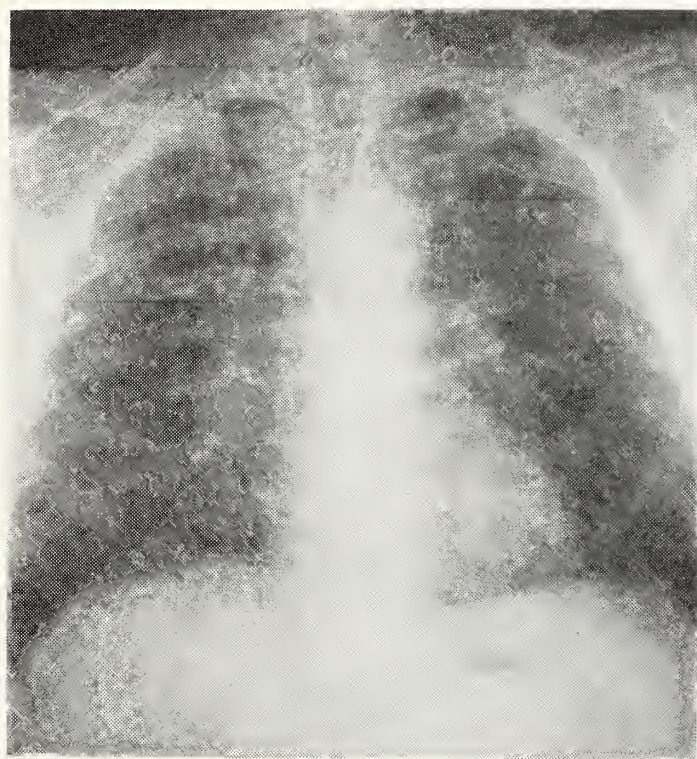


FIG. 1—PA Chest.

### Clinical Data:

EKG: Normal.

Pulmonary function studies: Severe restrictive and moderate obstructive ventilatory insufficiency, with a slight improvement after Isuprel.

Hematology: RBC 5.70 ( $\times 10^6$ ), hemoglobin 16.9 g/100 ml., PCV 49.4, retics 1.8%, MCV 87, MCH 29.3, MCHC 33.7, WBC 7,900, differential normal ex-

cept for 8% eosinophiles, platelets 306,000.

Blood chemistry: Serum alkaline phosphatase 237K-A units (N 4-17K-A units), serum bilirubin and other laboratory values were within normal limits.

Urinalysis: Normal.

Serum protein electrophoresis normal.

Liver scan normal.

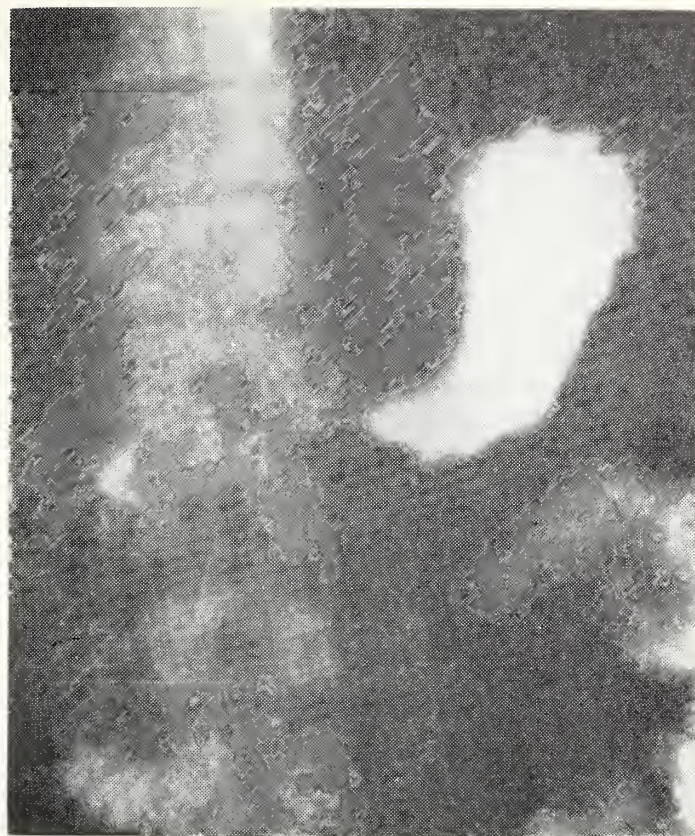


FIG. 2—Upper GI Series.



FIG. 3—Pelvis.

cept for 8% eosinophiles, platelets 306,000.

Blood chemistry: Serum alkaline phosphatase 237K-A units (N 4-17K-A units), serum bilirubin and other laboratory values were within normal limits.

Urinalysis: Normal.

Serum protein electrophoresis normal.

Liver scan normal.

### X-Ray Findings:

The chest (Figure 1) shows bilateral hilar adenopathy and a diffuse string-like density radiating from the hilum toward the periphery. There is peribronchial cuffing and presence of tubular line shadows, "tram lines," along the



proximal segmental bronchi. A fine network of line shadows and a few Kerley B lines are seen in the periphery of the lungs. Multiple parenchymal nodules measuring up to 5 mm. in diameter are seen throughout both lungs. No significant pleural effusion is appreciated. The heart size is within normal limits and no other signs of pulmonary venous hypertension are noted. The ribs, clavicles and dorsal spine are diffusely radiopaque and suggest diffuse osteoblastic metastases.

The Upper GI (Figure 2) shows that the stomach has a small capacity and the walls appear rigid and nodular. Large filling defects are seen in the antrum along the greater curvature. The esophagus, duodenal bulb, C-loop and proximal jejunum are normal.

Pelvis (Figure 3) shows mixed osteoblastic and osteolytic, but predominantly osteoblastic lesions throughout the lumbosacral spine, pelvis and proximal femurs.

#### *Differential Diagnosis*

Radiological differential diagnosis in the order descending probability are: Carcinoma of the stomach with lymphangitic spread to the lungs and mediastinum, and mixed osteoblastic and osteolytic metastases throughout the axial skeleton. Lymphosarcoma. Mastocytosis. Multiple myeloma involving the stomach, lungs and bones.

Tumors from the following organs are known to cause lymphangitic carcinomatosis:<sup>3,7</sup> Stomach, lung (bronchus), breast, prostate, colon, tongue, kidney, ovary, pancreas, cervix, endometrium, fallopian tube, esophagus, and urinary bladder.

Tumors known to cause osteoblastic metastases are:<sup>2</sup> All carcinomas (rare in adenocarcinoma of the thyroid and hypernephroma), particularly carcinomas of the prostate, breast, lung, pancreas, urinary bladder, and biliary tract; lymphomas; leukemia; multiple osteogenic sarcomas; Ewing's tumor; Gaucher's disease; malignant carcinoid; cerebellar medulloblastoma or cerebellar sarcoma.

Further clinical investigations included bone marrow particle and biopsy, which showed a focus of metastatic carcinoma with a few "signet ring" cells which suggested a primary gastric carcinoma. Gastroscopy and biopsy were performed. Pathological specimens showed a mucin-secreting adenocarcinoma with the primary in the stomach.

#### *Final Diagnosis:*

Scirrhus adenocarcinoma of the stomach with lymphangitic spread to the lungs and osteoblastic bone metastases.

#### *Management:*

Initially, 5-FU was considered. However, because of the patient's current excellent clinical condition, palliative radiation therapy was given to the hips where the patient complained of severe pain. The dose given was 4,500 rads in three weeks.

#### *Discussion:*

The incidence of gastric carcinoma has declined steadily since 1930 in both male and female in all age groups.<sup>1</sup> As a cause of death in males carcinoma of the stomach follows carcinoma of the lung, colon, and rectum, and prostate; in females, it follows carcinoma of the breast, uterus, and lung.<sup>1</sup> In 1973, in the U.S.A., the estimated number of patients having carcinoma of the stomach is 16,400, with 14,700 deaths.<sup>1</sup> Men have statistically a slightly higher incidence than women. The five year survival rate for carcinoma of the stomach of all stages are 20%, and localized forms 40%.<sup>1</sup> The incidence of bone metastases in carcinoma of the stomach ranges from 1.0 to 22.0%.<sup>4,6</sup> The incidence of osteoblastic versus osteolytic metastases is about equal.<sup>4</sup> Approximately 70% of cancer that causes lymphangitic spread to the lungs arises in the stomach,<sup>5</sup> the remainder being from the lung, breast, prostate, colon, gallbladder, tongue, kidney, and ovary.

Cancer cells can reach the pulmonary lymphatics by the following pathways:<sup>7</sup> A. The cancer cells can reach the subpleural lymphatics of visceral layer from the serous sac itself, with subsequent extensions along the pulmonary lymphatics. B. By hematogenous spread where the cancer cells reach the pulmonary arteries and become implanted beneath the pleura, with subsequent permeation of the pulmonary lymphatics. C. Metastases to the hilar lymph nodes, causing retardation and stagnation and finally obstruction, with reversed flow and retrograde permeation by the cancer cells in the lymphatics. Cancer cells are seen in sections to be packed within the dilated surface and intrapulmonary lymphatics, especially in the peribronchial and perivascular lymphatics. Varying degrees of pulmonary edema and pleural effusion are pres-



ent. Parenchymal tumor nodules may also be present.

YING T. LEE, M.D.  
JANET HUTCHESON, M.D.

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\* \* \*

Metrically Speaking

If the United States goes to the metric system, perhaps some of our favorite sayings will have to be changed thus:

- Traffic was 2.54 centimetering along the freeway.
- Hell's 2023.5 square meters.
- Peter Piper picked 8.81 liters of pickled peppers.
- 35.24 liters and 8.81 liters.
- It hit me like 907 kg of bricks.

- 0.9144 meter of beer.
- A miss is as good as 1.609 kilometers.
- A decigram of salt.
- Beat him within 2.54 cm of his life.
- All wool and 91.3 cm wide
- Give him 2.54 cm and he takes 1609 meters.
- Give him 453.6 gm of flesh.
- Missed it by 1.609 country km.

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## from the tennessee department of public health

### Water Quality Control in Tennessee

Waters of the State of Tennessee are the property of the State and are held in public trust for the use of the people of Tennessee. Water pollution of surface and underground waters violates this trust and prevents the maximum use of waters for necessary and reasonable uses.

#### WATER QUALITY CONTROL ACT

The Tennessee Water Quality Control Act of 1971 declared it to be the public policy that the people have a right to unpolluted waters and the government of the State has an obligation to take all prudent steps to secure, protect, and preserve this right. The purpose of this law is to abate existing pollution of the waters, to reclaim polluted waters, to prevent the future pollution of the waters, and to plan for the future use of the waters so that the water resources of Tennessee might be used and enjoyed to the fullest extent consistent with the maintenance of unpolluted waters.

Uses of water are many and varied. These include: source of public water supply, source of industrial water supply, propagation and maintenance of aquatic life, recreational boating and fishing, swimming, stock watering, irrigation, navigation, generation of power, and the enjoyment of scenic and esthetic qualities of the waters. The quality of the water must be proper for these uses or there will be damage to the public health and the economy of the State. Pollution means such alteration of the physical, chemical, biological, bacteriological or radiological properties of the waters as will result in harm, potential harm or detriment to the various water uses.

#### ADMINISTRATIVE MECHANISMS

The 1971 law created the seven member Tennessee Water Quality Control Board to replace the former nine member Stream Pollution Control Board. The new board members are: the Commissioner of the Department of Public Health, the Commissioner of the Department of Conservation, the Commissioner of the Department of Agriculture, and four citizen members

to represent the public-at-large, conservation interests, municipalities, and industries.

The Board has the following powers, duties, and responsibilities: to establish and adopt standards of quality for all waters of the State; to adopt rules and regulations for the administration of the law to prevent, control and abate pollution; to formulate and adopt a state water quality plan; and to hear appeals from orders or permits issued by the Commissioner of Public Health.

The law provides that the Commissioner of Public Health shall have the following powers, duties, and responsibilities: to exercise general supervision and control over the quality of all state waters; to administer and enforce all laws relating to pollution of such waters; to bring suits for any violation of the law; to make inspections and investigations, and to take such other actions necessary; and to require the submission of plans, specifications and other information. These powers may be delegated to the Director of the Division of Water Quality Control who is designated as the Technical Secretary of the Board.

The staff of the Division of Water Quality Control carries out the investigations, inspections, review of plans, surveys, studies and other activities necessary for the administration of the program.

The program is a combination of service to those causing pollution and enforcement to require those polluters to correct their pollution. Although it is the responsibility of the person causing pollution to design proposed treatment works and submit the plans to the Division, the staff is always willing to offer advice on the most effective and economical systems. Those who will not take steps leading to correction can expect legal enforcement.

A series of hearings was held by the staff on water quality criteria and stream water uses. These data were summarized and the Board has now adopted stream standards for all sections of streams in Tennessee. The new Federal legislation of 1972 will require additional hearings on stream standards to be held and higher standards to be adopted.



The staff is preparing comprehensive basin plans that will summarize all sources of pollution in each drainage basin, the amount of pollution correction required for each source and the time schedule for correction of each source. These reports should be completed by June, 1975. Correction of all sources of pollution will then take a few years after that date.

Each owner of each source of pollution in Tennessee is required to file an application for a permit to discharge into waters of the State. A permit cannot be issued if the discharge is causing pollution. A temporary permit, however, may be issued if the discharge is being corrected as agreed upon in the schedule. There are about 2,500 sources of discharge in Tennessee. About 700 of these are now operating legally under a permit or temporary permit. If the conditions on the permit or temporary permit are not followed, the Department may sue to obtain correction.

When the owner does not show evidence that the pollution will be corrected in an orderly manner, the Department may issue an order to

require correction. When it is urgent that the matter be resolved immediately, an injunction may be requested in Chancery Court.

## CONCLUSION

Although the work of the Stream Pollution Control Board was able to reduce the overall pollution in spite of inadequate enforcement powers and a small staff, the desired correction was not obtained between the years 1945 and 1971. The new program has more effective enforcement powers. Since the staff has been doubled far more correction is being obtained each year than in previous years.

Water pollution can be corrected to provide an acceptable water quality for all reasonable and necessary uses. This correction can be obtained in Tennessee during the 1970's. It will require a large amount of money and it will require far more interest by the public. We believe it will be worth the cost and effort.

S. LEARY JONES, *Director*  
*Division of Water Quality Control*

\* \* \*

## Health Care As A Human Right

It is frequently said that *health care is a human right*. What is meant by that? Does it mean that everyone has a right to a clean water supply? To a blood count? To renal dialysis? Clearly, what one might have a right to depends on what one needs relative to the needs of others and to resources available. Providing a clean water supply for a rural population is beyond the resources of most of the poorer nations. How then are we to interpret the injunction, health care is a human right? Or is this a pie-in-the-sky statement without practical applications?

This issue puts us in the middle of a socio-technical dilemma. A nation wishes to serve all its people. Resources are inadequate, and some will be served and some neglected. Now we add the precept: health care is a human right. Have we deepened the dilemma impossibly? I think not. I believe that precept is valid both as a social imperative and a practical

principle, largely because what makes sense in terms of human right also makes sense in terms of the wise use of limited health care resources.

Thus, what one has a right to is to have one's needs taken into account as decisions are made on whom to serve and whom to leave unserved. Social injustice lies not in not receiving health care, but in not being taken into account as health care decisions are made.

This precept calls for conceptual extension of health care beyond its usual mode of operation. It requires first, that the system accepts responsibility for all the people—not to serve all, but to take the needs of all into account. This, in turn, calls for the capability for searching through the population, identifying priority problems and, when possible, serving those most in need.

From "International Trends Toward  
Humanization of Health Services."  
by John H. Bryant, M.D.  
*JAMA*, June 25, 1973, p. 1772





MORSE KOCHTITZKY

## president's page

### AMA's Annual Convention

AMA's 122nd annual convention in New York was attended by 8,756 physicians. Total registration was 21,584. Detailed coverage of the convention will be found in the July 2-9 issue of the *American Medical News*.

Russell B. Roth, Pennsylvania, was installed as AMA's 128th President. Malcolm C. Todd, California, was named President-Elect. Tom E. Nesbitt, Nashville, was unanimously elected Speaker of the House of Delegates, and John H. Burkhart, Knoxville, was re-elected to the Council on Constitution and by-Laws.

President Roth's inaugural address pointed out that the profession has many societal obligations and responsibilities, and that "the individual physician can do little about them on his own." Only through "the collective actions of organized physicians can these jobs be done," he said. He termed AMA as the bastion of professionalism and the stronghold of responsible socio-economic leadership. One of these, he said, is the AMA defense that is turning back the drive for a "compulsory, national medical care delivery law that would promise what could not be delivered, at a price we would be reluctant to pay, through a vast, new administrative bureaucracy." The effective defense has not happened by chance or through uncoordinated efforts.

The House of Delegates conducted a record amount of business in the most voluminous session ever conducted by the AMA House. There were 84 reports and 179 resolutions acted upon. The House urged continuation of the leadership position taken by AMA in implementing the Professional Standards Review Organization law, but said the AMA should oppose "any facets of this current legislation which act to the deterioration of quality care." It also "recognized that repeal or modification of PSRO legislation ultimately may be required to preserve the high quality of patient care." Dr. William I. Bauer, Director of the Government's PSRO office, told a meeting of the organization of State Medical Association President's that State Associations and other medical groups will receive early this month a packet containing detailed guidelines on the designation of PSRO areas. The guidelines, he said, point out that a PSRO should not cross a state line or divide a county, that the area should include the minimum of 300 and a maximum of about 2,500 physicians, and that boundaries of existing review programs should be considered.

In other actions, the House called for periodic reports on the rising costs of hospital care; adopted a resolution expressing to the American Hospital Association "grave reservations" about the AHA's quality assurance program "because of its potential for lay control of medical practice"; heard a report that a universal claim form acceptable to physicians and insurance companies hopefully will be ready by the end of 1973; reaffirmed the policy that it is the right of every citizen to have access to adequate medical care, but it is the responsibility of the citizen or of society to seek it; reaffirmed its policy on abortion, while encouraging development of counseling programs for expectant mothers and incentives for continuing pregnancy to term; commended the Board for "complete, accurate and timely response to the deficiencies in the recent NBC program on *WHAT PRICE HEALTH?*"; and called for action to correct inequities in the method of calculating physicians' social security benefits.

Obviously, the AMA is working for you. If you have not yet paid your 1973 dues, or renewed your membership, now is the time to act.

Sincerely,

President



# Journal

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AUGUST, 1973

# editorials

## ON THE PRESERVATION OF MAN

Conservation—how, and of and for what? This whole issue of the JOURNAL is devoted to the topic of conservation, though due to unforeseen difficulties the content is not as diversified as we had anticipated. As it turned out, it is concerned more with pollution than with conservation, though the two need to be considered together. Everyone is for conservation, and, like motherhood, it is generically non-controversial, although there is a lot of name calling associated with it. Since this is so, it might be well to define a few terms and positions, and the best way might be to answer the three questions posed in the title: What are we trying to conserve (and do we—or some people—really mean “preserve?”), how, and for what purpose?

Although Galileo and Copernicus demonstrated, at considerable cost to themselves, that

the earth is not the physical center of the universe, Western Civilization has largely accepted the Biblical teaching that the world was created to be inhabited by man, and that all things in it were created for man's use and welfare. This was historically widely misapplied to give man—translate “European”—a hunting license, so that the commandment to “subdue the earth” came to mean “exploit” the earth and its inhabitants—a strange interpretation for supposed followers of Jesus, but less strange when one considers that Western Civilization and Christianity were (and indeed often still are) widely considered to be synonymous. They are, in fact, antipathetic, as demonstrated by civilization's treatment of the earth (not to mention its people), whence our current problem.

According to my dictionary “conserve” and “preserve” are both defined as “to keep in a safe state, free from harm or abuse.” “Conserve” is further defined as “to preserve, to prevent exploitation” and so, at least in that dictionary, they are virtually synonymous. I believe, however, that in the minds of most of us, at least insofar as it applies to the environment, there is a slightly different connotation, in that “to preserve” means to maintain something in its natural state for the purpose of having it in its natural state, whereas to conserve means to use, without exploitation, in the most thrifty and practical manner possible, which could in certain instances include preservation in the natural state.

It is incumbent upon man as heir to creation to use its resources for the ultimate good of humanity. (I know there are those who consider this view of man egotistical, and unwarranted.) Defining that ultimate good is the point at which “the rubber meets the road.” Too often the ultimate good has been considered in the light of special interests, or, succinctly put, “What's good for General Bullmoose is good for the country.” Most of our problems arise in the attempt to define this “ultimate good.” Does, for example, the need for coal warrant the stripping of the countryside, with its resulting manifold problems, or is there better use for the land? Is there a better way to obtain the coal, and if it would cost more, would the ultimate cost be less? Is the harm from DDT greater than the good accomplished with its use, for example in eradicating malaria or in improved nutrition in underdeveloped areas



of the world? Or are there other, better ways of accomplishing the same thing? And are the alternatives less desirable? We find coal producers and users in one case and health professionals and malaria victims in the other pitted against ecologists, naturalists, and others. The list could go on and on, and often, as in the case of insecticides, we physicians find ourselves in a real dilemma, seeing the good and the harm on both sides.

It is a part of our nature that we want to have it both ways in any situation. It is evidence of maturity when we realize it won't come that way very often. Preservation of wilderness may be good from an overall ecological and aesthetic standpoint, but for a real live view of man's place in the wilderness, read "Fragile Man, Fragile Nature," by Galen Rowell.<sup>1</sup> In the most beautiful area he had ever seen, in Alaska, he nearly lost his life when the helicopter which was to evacuate him and his companion was delayed several weeks by the same bad weather which nearly killed them. The beauty of the lonely meadow in which they camped was ruined forever when they dammed and redirected the little stream, now become a raging torrent, to prevent their being drowned. Two things stand out. One, they did not destroy the dams when the helicopter finally landed, because "minutes ticked by at hundreds of dollars an hour while [it] waited for us to disassemble our camp. . . . Unconsciously we had placed a dollar value on nature's chosen course for a mountain stream." The other, "It is hard to consider the intrinsic value of wilderness while it is still a real adversary. . . . If we did this for a living, we'd never think of climbing a mountain for leisure. We'd head for the bright lights of the city." There is no way to enjoy wilderness without the advantages given by civilization. It is indeed "red in tooth and claw." It will destroy even the hardest. We want it both ways: wilderness and civilization. The land area available for civilization is running out.

Dr. Rene Dubos, in an article entitled "Humanizing the Earth,"<sup>2</sup> indicates the fallacy of assuming that "Nature always knows best." Nature destroys forests by lightning, removes whole islands by volcanic action, and by fossil accounts has destroyed many species and even whole ecosystems. It is absurd therefore to assume that if man leaves an area alone it will remain as it always has, and that any work that "Nature" does on it will automatically make it

better. In undisturbed nature, says Dr. Dubos, there are no problems, only solutions, precisely because the equilibrium state is an adaptive state. "The symbiotic interplay between man and nature can generate ecosystems much more diversified and more interesting than those occurring in the state of wilderness."

He points out that far from disposing of its wastes, "nature fails in many cases to complete the recycling processes that are the earmarks of ecological equilibrium. Examples are accumulations of peat, coal, oil, shale, and other deposits of organic origin. . . . Paradoxically, man helps somewhat in the completion of the cycle when he burns [them]." Paleontology is based on nature's junkyards. In short, the natural world is not the best possible world. "Nature is incapable by itself of fully expressing the diversified potentialities of the earth." Man's role on the earth is to subdue it—but not, in doing so, to destroy it.

Many of the things of beauty we treasure most for their "natural beauty" are either man made or were improved on by man. Until man intervened, says Dr. Dubos, much of the earth was covered with forests and marshes, which though possessed of grandeur, were monotonous until man began to "humanize" them. We appreciate this less on our newly developed continent than in Europe, where Dr. Dubos grew up, where the land has been in continuous use for over 2000 years.

"The immense duration of certain man-made landscapes contributes a peculiar sense of tranquility to many parts of the Old World; it inspires confidence that mankind can act as steward of the earth for the sake of the future."<sup>2</sup> He had better. Scientific agriculture has replaced sound empirical practice, and though the yields are large, the efficiency is often very low. Often the farmer expends more calories than the food calories recovered. It depends, therefore, on a continued supply of cheap fuel.

Human life is the most precious part of creation, and all of our resources must be utilized to the maximum for man's welfare. It would be strange if we as physicians should espouse any other program for its use. It means using without wasting, and insofar as possible, without polluting. Individuals may have to forego some of their supposed rights in order to accomplish this. The right of an industry to "do its thing" on its own property cannot include destroying all life in an entire river or lake, or



polluting the air over hundreds of square miles. The right of one person to smoke cannot include elevating to dangerous levels the carbon monoxide in the blood of a cardiac cripple who happens to be in the same room with him. Man appears to be fulfilling the prophecy given nearly 3000 years ago by the prophet Isaiah:

"The earth shall be utterly laid waste and utterly despoiled; . . . The earth lies polluted by its inhabitants, for they have transgressed the laws, and violated the statutes." (Isaiah 24:3-5)

God has given us only one world, as far as our present knowledge goes. Its resources seemed endless until a relatively few years ago, and its land was raped for centuries. Now we are at the place where the end of the usable resources is in sight. Unless those of us who are in responsible positions act responsibly, we are in deep trouble. It will involve difficult decisions, which must be based not on emotion or on personal prerogative or even on personal preference, but on accurate information and on responsibility to our neighbor.

Here's to the memory of John McVeigh

Who died defending his right-of-way.

He was right, dead right, as he sped along,

But he's just as dead as if he'd been wrong!

1. Rowell, G. "Fragile Nature. Fragile Man." *Sierra Club Bull*, 58:5, Jan, 1973.

2. Dubos, R. "Humanizing the Earth." *Science*, 179:769, Feb 23, 1973.

J.B.T.

## FETAL WASTAGE

As this is the conservation issue of the JOURNAL, it seems appropriate to include in it somewhere an item about something which is becoming one of our greatest resource losses—loss of human resources.

Gynecologists have long been concerned with the problem of fetal wastage, the end result of spontaneous abortion. The exact percentage of pregnancies terminating in this way is difficult to come by, because abortion often occurs in the first 2 or 3 weeks, manifesting itself only as a prolonged cycle ending with a heavy flow, and because setting up a controlled experiment would pose serious problems—at least at present, and hopefully also in the future. Various estimates run from as low as 10 or 15% to as much as 40%. The best estimates seem to be around 30%. In other words, somewhere

around a third of all fertilized ova are lost, many of them because they are blighted, or because of fetal anomalies incompatible with continued life. Infection and hormonal imbalance, not to mention imponderables, play a role. A lot of research effort has gone into studies for stopping this fetal wastage, for promoting fertility and for salvaging infants with congenital anomalies. Somebody must have thought all this new life to be valuable.

Now we have a paradox. Our highest court is saying that human life is valuable only under certain conditions, and has set about defining these conditions. It boils down basically to this: If the mother thinks the life is not valuable, then it is not valuable. (The Nazis said, if the life is Jewish, it is not valuable.) The limiting factor is the safety of the procedure from the mother's standpoint.

The argument of those seeking unlimited abortion is that the mother's body is hers to do with as she pleases, and her "rights" are being interfered with if she must carry an unwanted pregnancy. (It was also her "right" to become pregnant in the first place, no?) If this philosophy is accepted, a very dangerous precedent will have been set, because it would seem in fact to establish ownership of one person by another, violating the fetus' constitutional rights.

Human life is either precious or it is not precious. It cannot be precious sometimes and not at other times. It appears we were really begging the issue in all the quarreling about when does a fetus really become alive. The real issue has always been, "Me first, and the devil take the hindmost," the "hindmost" being the defenseless one.

The question to the profession is this: To what extent will you, doctor, abet this wastage?

J.B.T.

## ON LIBRARIES

Information is the result of economic effort, and its cost must be borne by someone.

The above quote is from the testimony of Eugene Garfield, board chairman of Information Industry Association, before the National Commission on Libraries and Information Sciences. We need to take it to heart because of all people who should know better, we physicians tend to take our libraries and librarians for granted and expect that they will always be there, free for our asking. They will not.

Garfield went on to state that user-based



charges must inevitably be instituted, and that the commission would be serving high public purpose if it set out to educate the public to the inevitable. He commented that the "depression-type psychology that dominated library training cultivated the concept that library service should be a labor of love and that service to the user should be free."

Most pertinent to our situation is his comment that "medical and other librarians were and often still are taken for granted because no monetary value is placed on the product of their efforts. Physicians as a class disdain library services. Whereas they would think twice about free medical service, they take medical information service for granted."

Libraries, especially medical libraries, over the country are in trouble, and Mr. Garfield seems to have touched the root of the problem. Medical students often take the position that the library owes them medical literature. Someone once made the comment that people do not borrow books—they only steal them—a seemingly cynical statement, and yet those of us on library committees know that books and journals, often irreplaceable, are stolen or their pages ripped out, and are checked out and often not returned, or are returned only after much note writing by the library staff. Basic to all of this is a callous disregard of the needs of others.

Well, the free ride is over. The government cow, as far as libraries are concerned, is drying up. Elsewhere in this issue of the JOURNAL (Medical News in Tennessee) is an announcement that with the end of RMP the Memphis RMP library service has died, and from its ashes has arisen the University of Tennessee Medical Units Library Extension program, which is operating realistically on a fee for service basis. Direct government subsidy of medical libraries has been withdrawn, and medical schools, caught in the bind of reduced federal funding, have further reduced library budgets.

Mr. Garfield admits that libraries may someday furnish technical and scientific information free to the public. But the cost must be borne by someone. "Who that someone shall be will vary according to local and other circumstances consequent to a pluralistic society." Will that someone be the user, fee for service, or all of us? The present federal administration is operating on the theory that insofar as possible

beneficiaries of services should pay the cost. Can we condemn "free" medical service, and not support user-based charges by libraries?

It is time we gave some thought to our medical libraries, those in our hospitals and the larger repositories in our medical schools. Do we need them? If we do, we must support them. We must not put them in the category of things we appreciate only after they are gone.

J.B.T.



DUNAVANT, JAMES LYNN, Ripley, died June 6, 1973, age 83. Graduate of Loyola University School of Medicine, 1918. Member of Northwest Tennessee Academy of Medicine.

O'BRIEN, PAUL J., LaFollette, died June 15, 1973, age 66. Graduate of University of Illinois, 1935. Member of Campbell County Medical Society.



The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

#### **CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY**

David Garland Garrett, Jr., M.D., Chattanooga  
Teonides Y. Teves, M.D., Chattanooga

#### **HENRY COUNTY MEDICAL SOCIETY**

William R. Campbell, M.D., Paris

#### **KNOXVILLE ACADEMY OF MEDICINE**

Frances K. Patterson, M.D., Knoxville

#### **MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY**

Patricia P. Duckworth, M.D., Memphis  
Ira B. Fuller, III, M.D., Memphis  
Brooks V. Monaghan, Jr., M.D., Memphis  
Robert W. Mikoa, M.D., Memphis

#### **NASHVILLE ACADEMY OF MEDICINE**

John E. Chapman, M.D., Nashville  
William F. Fleet, Jr., M.D., Madison  
David W. Gaw, M.D., Nashville  
Edmon L. Green, M.D., Nashville  
James H. Growdon, Jr., M.D., Nashville  
Warren F. McPherson, M.D., Nashville  
V. Damodara Reddy, M.D., Nashville  
P. B. Vasudeo, M.D., Nashville  
Mario K. Yu, M.D., Nashville



## programs and news of medical societies

### Knoxville Academy of Medicine

The Knoxville Academy of Medicine held its regular monthly meeting July 10 at the KAM Building. The Medical Section of KAM's Continuing Medical Education Program consisted of a talk by Dr. Charles Huguley, Chief of Hematology Section, Emory University School of Medicine, on "Management of the Chronic Leukemias."

### Nashville Academy of Medicine

The Nashville Academy of Medicine office has reported that the Academy membership now exceeds 700 physicians representing 37 fields of practice. The members are graduates of 68 medical schools, 54 of which are in the United States.

## national news

### THIS MONTH IN WASHINGTON (From Washington Office, AMA)

Malcolm C. Todd, M.D., a Long Beach, Calif., general surgeon, is the new president-elect of the American Medical Association. He was elected by the House of Delegates during AMA's annual convention.

The 60-year-old Dr. Todd will serve one year and take office as the Association's 129th president next June in Chicago.

Dr. Todd was born April 10, 1913 in Carlyle, Ill. He is a graduate of the University of Illinois and Northwestern University Medical School.

As associate clinical professor of surgery at the University of California in Irvine, Dr. Todd is a fellow of the American College of Surgeons, International College of Surgeons, American College of Gastroenterology, and a diplomat of the American Board of Surgery.

Dr. Todd is a past president of the California Medical Association and has been a member of AMA's House of Delegates since 1959. He is chairman emeritus of AMA's Council on Health Manpower and a member of the National Advisory Committee on Health Manpower.

Dr. Todd is married to the former Ruth Holle Schlake of Chicago. They have one son, Malcolm Douglas Todd.

\* \* \*

President Nixon cited "a spirit of partnership"

with Congress as he signed a one-year extension of major Public Health Service programs. The extension had been strongly opposed by the Administration which wanted to eliminate five of the 12 programs and cut others.

The Chief Executive declared that the bill strikes "a reasonable compromise with the Administration," noting that it keeps the programs alive for only one year instead of the customary three. In adopting the bill by overwhelming votes, Congress expressed an intention to review the programs to determine if it agreed with the Administration's policy decisions.

The 12 programs involved and the money authorizations for the fiscal year that starts July 1 are:

—Health services research and demonstration (\$42.6 million); National health statistics (\$14.5 million); Public health training (\$23.3 million); Migrant health services (\$26.7 million); Comprehensive health planning (\$360.5 million); Medical libraries (\$8.4 million); Hospital construction (\$197.2 million); Allied health training (\$44.3 million); Regional medical programs (\$159 million); Family planning (\$118 million); Community mental health centers (\$234 million); Developmental disabilities (\$41.7 million).

The Administration had urged Congress to eliminate or phase out the hospital construction or Hill-Burton program, public health training, allied health training, regional medical program (RMP) and community mental health centers.

In a statement released with the signing of the bill and two other measures, President Nixon said "while the authorization levels are higher than I believe desirable, they will not damage our over-all fiscal position if the Congress now follows my recommendations in the appropriations process."

"So long as the Congress follows a responsible course in the passage of future spending bills, I will cooperate in a spirit of partnership. But as we go forward let there be no mistake about one fundamental point: if bills come to my desk which are irresponsible and would break open the federal budget, forcing more inflation upon the American people, I will veto them."

The RMP program has already been disbanded at HEW headquarters. Apparently, some sort of a makeshift arrangement will have



to be set up to keep it operating for one more year anyway.

There was only one vote in Congress—by Rep. Philip Crane (R. Ill.) in either house of Congress against the extension bill, which made unlikely any successful veto.

The chief Administration argument for closing down the five programs was that they were inefficient, had outlived their usefulness, or could be handled more appropriately by the states.

\* \* \*

The important national Professional Standards Review council has been established with the appointment of 11 physicians. The council will advise HEW Secretary Caspar Weinberger on the Professional Standards Review Organizations (PSRO) program to monitor the quality of medical care in Medicare and Medicaid.

"The contribution of this council will be vital to the accomplishment of the objectives of the PSRO legislation, and we are indeed fortunate to be able to draw upon such a high caliber of expertise," Weinberger said.

Members of the council were selected from among 200 physicians of recognized standing and distinction in the appraisal of medical practice who were nominated by national organizations representing practicing physicians and by consumer groups and other health care interests.

Those appointed to serve a three-year term on the council are:

Clement R. Brown, M.D., Director, Medical Education, Mercy Hospital and Medical Center, Chicago; Ruth M. Covell, M.D., Assistant to the Dean of School of Medicine, Univ. of California at San Diego; Merlin K. Duval, M.D., Vice President for Health Sciences, Univ. of Arizona, former Assistant HEW Secretary for Health; Thomas J. Greene, M.D., Surgeon, Detroit; Robert J. Haggerty, M.D., Professor of Pediatrics, Univ. of Rochester, N.Y. School of Medicine and Dentistry; Donald C. Harrington, M.D., obstetrician-gynecologist and medical director, San Joaquin Foundation for Medical Care, Stockton, Calif.; Robert B. Hunter, M.D., family physician, Sedro Woolley, Wash., member of the board of the American Medical Association; Alan R. Nelson, M.D., internist, Salt Lake City, Utah, alternate delegate to AMA; Raymond J. Saloom, D.O., Osteopathic physician, Harrisville, Penna.;

Ernest W. Saward, M.D., Professor of Social Medicine, Univ. of Rochester School of Medicine and Dentistry, Rochester, N.Y.; Willard C. Scrivner, M.D., obstetrician-gynecologist, Belleville, Ill., president of the Illinois State Medical Society and member of AMA committee on health care of the poor.

\* \* \*

The Board of Trustees has appointed Robert H. Moser, M.D., the Chief Editor of the Journal of the American Medical Association effective October 1. At the same time Dr. Moser will become Director of the Division of Scientific Publications, which has editorial responsibility for JAMA and the AMA's ten specialty journals.

Hugh H. Hussey, M.D., who has held both positions since 1970, will remain a fulltime member of the staff as Editor Emeritus. He will also assume responsibilities for coordinating publication of the specialty journals.

A graduate of the Georgetown University School of Medicine, Dr. Moser, 50, currently practices internal medicine with the Maui Medical Group, Wailuku, Hawaii. Certified by the Board of Internal Medicine, Dr. Moser followed a career of medical officer in the U.S. Army, rising to the position of chief of medicine at Walter Reed General Hospital, Washington, D.C. He had an appointment to the clinical faculty at Georgetown, where he was active in teaching, research and the authorship of a number of original articles. Currently he is clinical professor of medicine at the University of Hawaii and the University of Washington Colleges of Medicine.

\* \* \*

The special use of drugs by young athletes is probably increasing in the same proportion as drug abuse is increasing among the general student population, the American Medical Association has told a Senate subcommittee.

Dr. Donald L. Cooper, team physician at Oklahoma State University and a member of an AMA committee concerned with the medical aspects of sports, noted before a subcommittee investigating juvenile delinquency that while there are no current surveys on drug abuse by young athletes, earlier studies show a direct correlation of use by athletes and the general student body.

The report of the National Commission on Marijuana and Drug abuse, Dr. Cooper pointed out, "indicates that drug abuse among the gen-



eral student population has increased, and it is logical to expect that athletes as members of that subculture have also been influenced to abuse drugs more in recent years."

Emphasizing AMA's longtime stand that drugs and athletics don't mix, Dr. Cooper said that in his opinion drugs—amphetamines—do not enhance athletic performance, despite some conflicting reports in the literature as to possible minimal benefits.

"Some studies actually show impairment of certain skills," Dr. Cooper said, warning that there can also be substantial detrimental effects from continued amphetamine abuse.

Dr. Cooper pointed out that concerted efforts have been made by the athletic community to control abuse despite the incentive to use any method to improve performance, particularly in international competition.

However, Dr. Cooper cautioned against mass testing programs, such as the monitoring of urine, saying such programs throughout the nation for school and college athletes would be scientifically unreliable, expensive and time consuming.

\* \* \*

Spokesmen for drug companies and physicians' groups have urged the Food and Drug Administration to delay guidelines on what cough and allergy prescription products may contain.

"These products have been used safely and successfully by physicians for decades," the American Medical Association told a FDA hearing. Asking no "precipitous action," the AMA said "there is hardly a citizen who has not received some relief from bothersome symptoms via one or more of these products."

The proposed guidelines cover more than 200 of the most widely prescribed prescription cough and allergy medicines. Specific limitations would be placed on composition such as banning combinations of expectorants and antihistamines. Effect will be to bar continued marketing of many cough and allergy preparations.

John H. Budd, M.D., a member of the AMA Board of Trustees, said the interim guidelines would not serve the public interest. Dr. Budd noted that a FDA panel on over-the-counter drugs is reviewing the OTC situation. "It is apparent that the final monograph that emerges from this review process will have a substantial

bearing on the formulation and labeling of prescription as well as OTC drugs . . . and in many respects will determine the related issues," said Dr. Budd.

"The proposed interim guidelines were not formulated under the specific requirements of the drug law," he said, "but rather were devised on the basis of subjective judgments made by members of the appropriate drug efficacy study panels."

The AMA official said that if one considers the contribution any one drug may make to a mixture, published evidence as specified in the law does not exist for any of the classes of drugs in cough mixtures: antitussives, expectorants, antihistamines, decongestants, demulcents or flavorings.

"The problem that confronts us is not a simple straightforward one such as determining the effect a drug has on bacterial multiplication, urine output or level of a plasma constituent. Rather we are in the difficult area of subjective human feelings, symptoms with profound psychological as well as physical parameters. The remedies for cough were developed by trial and error over decades and even hundreds of years. The long history behind the expectorant ingredients . . . have put them, in the doses used, to the test of safety and by the impressions of clinicians to the test of effectiveness. How effective they are is difficult to measure since for cough the placebo effect is extremely important. Many coughs respond simply to a drink of water. Other coughs respond to expectorants. Still others respond only to substantial doses of codeine or an equivalent antitussive, and finally some coughs will yield to nothing yet devised."

## medical news in tennessee

### CME Programs Approved

The Council on Medical Education of the American Medical Association at its June, 1973 meeting voted to accept as accredited institutions for continuing medical education the following institutions or organizations approved by TMA:

Baroness Erlanger Hospital, Chattanooga  
Bristol Memorial Hospital, Bristol



Jackson-Madison County General Hospital,  
Jackson

Knoxville Academy of Medicine, Knoxville

Other AMA accredited CME programs in the state are those of Meharry Medical College, The University of Tennessee Medical Units, U.T. Memorial Hospital, Knoxville, and Vanderbilt University.

### University of Tennessee Medical Units Library Extension Service

Sarah Jean Jackson, Head, Reader Services Division of the University of Tennessee Medical Unit Library, announces that the Memphis RMP Library Program will be continued as the University of Tennessee Medical Units Library Extension Program and will function on a fee-for-service basis. Clientele will include those health professionals not affiliated on a full-time basis with the University of Tennessee and who reside in the geographic area of the MRMP and the state of Tennessee.

The program will function as a department of the Medical Units Library under the immediate supervision of Betsy Stone. Free telephone service will be discontinued. All in-coming calls will be handled through the library switchboard and directed to the Extension Librarian on duty.

Charges are as follows:

Reference (including bibliography preparation) .....	\$2.00
Photocopy .....	5¢ per page plus 35¢ service charge
Medline .....	\$8.00
Lending of Books and Journals .....	35¢ service charge
Hospital Library Consultation ..	travel expenses

### University of Tennessee Medical Units

Two new educational programs, one for the practicing physician and the other for the general public, have been established within the College of Medicine at The University of Tennessee Medical Units. Both programs, announced by Dean of Medicine T. Albert Farmer, represent additional areas of off-campus involvement for the college, consistent with UT policy of statewide participation in meeting educational and training needs.

E. William Rosenberg, M.D. (Univ. Pennsylvania) has been appointed associate dean for postgraduate and public education to direct the new activities. Dr. Rosenberg, chairman of the college's division of dermatology, has been

a member of the UT medical faculty since 1967. He will continue to direct the dermatology division, in addition to his new duties as associate dean.

Dean Farmer said that the practicing physician-phase of the new program will be a form of continuing postgraduate education. It will be designed to assist physicians to evaluate objectively what they are doing by comparing their methods and results against norms which fellow physicians have developed.

The service will incorporate a computer system, compiling and correlating medical data nationwide, and will be available on request to individual physicians and to hospital medical staffs.

The public education-phase of the college's new curriculum will concentrate on preventive medicine and the conservation of health, and will channel health information to the general public through regular programs on public television, in newspaper columns, other mass media and such University facilities as the Agricultural Extension Division and its agents throughout the state.

## personal news

DR. CLIFTON R. CLEAVELAND, Signal Mountain, has been elected a Fellow in the American College of Physicians.

DR. JAMES B. COX, Knoxville, has been elected to the Board of Trustees of the Southeastern Society of Plastic and Reconstructive Surgeons.

DR. JAMES HALL, Trenton, has been named to the first Extendicare Advisory Staff by the Board of Directors of Gibson General Hospital.

DR. WESLEY F. JONES, Lexington, has been elected Chief of Staff of the Lexington Hospital. Others elected were DR. WARREN RAMER, JR., Vice Chief of Staff and DR. WARREN RAMER, SR., Secretary.

Dr. M. F. LANGSTON, Chattanooga, has announced retirement from active practice after 27 years.

DR. ROBERT F. LASH, Knoxville, has been awarded the Service to Mankind Award by the West Knoxville Sertoma Club.

DR. MYRON LEWIS, Memphis, is a new Fellow of the American College of Physicians.

DR. GORDON McCALL, Maryville, has received an award for distinguished leadership in the East Tennessee Heart Association.

DR. ROLAND H. MYERS, Memphis, has been elected Chairman of the State Advisory Board for Tuberculosis Control.



DR. TOM E. NESBITT, Nashville, has been elected speaker of the House of Delegates of the American Medical Association.

DR. JAMES T. ROBERTSON, Memphis, has been awarded a grant for research of cerebrovascular disease.

DR. E. WILLIAM ROSENBERG, Memphis, has been appointed Associate Dean for postgraduate and public education at the University of Tennessee Medical Units.

DR. DAVID E. STEWART and DR. JULIAN K. WELCH, JR., both of Brownsville, have been re-elected members of the American Academy of Family Physicians.

DR. GENE H. STOLLERMAN, Memphis, has received the Alumni Public Service Award from the University of Tennessee General Alumni Association.

DR. GEORGE G. YOUNG, Chattanooga, has received the Distinguished Service Award from Berry Academy, Mount Berry, Georgia.

**ERRATUM**

In the July issue it was reported that Dr. Charles D. McDonald, Jr. of Chattanooga was recently certified by the American Board of Internal Medicine. The announcement should have read that Dr. McDonald was recently certified by the Subspecialty Board of Cardiovascular Disease.

The JOURNAL regrets the error.

**announcements**

**CALENDAR OF MEETINGS**  
**STATE**

Sept. 25-26 Governor's Conference on Aging, Nashville Municipal Auditorium, Nashville

Oct. 1-2 Tennessee Valley Medical Assembly, Read House, Chattanooga

October 13 Memphis Dermatological Society Annual Meeting, University of Tennessee Medical Units, Memphis.

**NATIONAL**

Aug. 20-25 American Physiological Society, University of Rochester, Rochester, N.Y.

Sept. 6-8 American Association of Obstetricians and Gynecologists, The Homestead, Hot Springs, Va.

Sept. 12-15 American Thyroid Association, Olympic Hotel, Seattle

Sept. 14-15 American Society of Ophthalmologic and Otolaryngologic Allergy, Adolphus, Dallas

Sept. 15-16 American Association of Ophthalmology, Sheraton Hotel, Dallas

Sept. 16-20 American Academy of Ophthalmology and Otolaryngology, Convention Center, Dallas

Sept. 17-18 AMA Congress on Occupational Health, Ben Franklin Hotel, Philadelphia

Sept. 20-23 American Society of Internal Medicine, Interim Meeting, Marriott Hotel, Dallas

Oct. 1-4 American Academy of Family Physicians, Denver

Oct. 7-11 American Society of Anesthesiologists, San Francisco Hilton, San Francisco

Oct. 11-13 12th Annual Cardiovascular Symposium, Williamsburg Colony Inn, Williamsburg, Va.

Oct. 15-19 American College of Surgeons, Clinical Congress, Conrad Hilton, Chicago

Oct. 18-21 American Academy of Child Psychiatry, Shoreham Hotel, Washington, D.C.

Oct. 19-26 College of American Pathologists, Conrad Hilton Hotel, Chicago

Oct. 19-26 American Society of Clinical Pathologists, Palmer House, Chicago

Oct. 20-25 American Academy of Pediatrics, Palmer House, Chicago

Oct. 21-26 American Academy of Physical Medicine and Rehabilitation, Sheraton Park Hotel, Washington, D.C.

Oct. 21-26 American Society of Plastic and Reconstructive Surgeons, Diplomat Hotel, Hollywood, Fla.

Oct. 23-25 American College of Emergency Physicians, Fairmont Hotel, Dallas

Nov. 11-14 67th Annual Meeting, Southern Medical Association, Convention Center, San Antonio

**Conference on Aging—September 25-26**

The Tennessee Governor's Conference on Aging, sponsored jointly by the Tennessee Department of Mental Health and the Tennessee Commission on Aging, will be held September 25 and 26 at the Nashville Municipal Auditorium. The theme of this year's program is "Community Services for Older Tennesseans." (How to provide services at the local level.)

In addition to Governor Winfield Dunn, participants in the program will include: Dr. Arthur Fleming, U.S. Commissioner on Aging, HEW; Senator Howard Baker; Dr. Frances Carp of the University of California Institute of Urban and Regional Development; Dr. William Darby, noted national consultant on health and nutrition; and Bert Brown, M.D., Executive Director, National Institute of Mental Health.

For complete information, contact the Tennessee Commission on Aging, 510 Gay Street, Nashville, Tennessee 37219.



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Nashville, Tenn. 37219

## Rondomycin® (methacycline HCl)

**CONTRAINDICATIONS:** Hypersensitivity to any of the tetracyclines.

**WARNINGS:** Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

**Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

**Usage in newborns, infants, and children.** (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

**PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

**ADVERSE REACTIONS:** **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

**Skin:** maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

**Renal toxicity:** rise in BUN, apparently dose related (See **WARNINGS**).

**Hypersensitivity:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

**Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**USUAL DOSAGE: Adults**—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

**Children**—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

**Concomitant therapy:** Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

**SUPPLIED:** 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73



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### Radioactive Iodine Therapy Of Thyroid Carcinoma

Nodular goiter is one of the most common endocrine problems. Many of these nodules are removed surgically because of the fear of cancer. Since the problem of thyroid nodules and the fear of thyroid cancer is so prevalent, a reappraisal of the use of radioactive iodine in the therapy of thyroid cancer is warranted.

Thyroid cancer as an incidental finding at autopsy is common, being found in 2% of autopsies in the United States and 14% of autopsies in Japan. Almost all of the unsuspected cancers found at autopsy are occult, sclerosing, papillary carcinomas. Since thyroid cancer is a cause of death in only 1200 people per year in the United States, the great variance between the high incidence at autopsy and the low incidence as a cause of death indicates a very benign course for most thyroid cancers. Of the thyroid cancers that are clinically apparent as palpable nodules, the following frequency distribution is usual:

Papillary and/or follicular	85%
Medullary	7%
Undifferentiated large cell	4%
Undifferentiated small cell	3%
Miscellaneous	1%

Since papillary and follicular cancers are the only thyroid cancers that concentrate iodine, radioactive iodine therapy should be limited to these types of cancer.

Thyroid scanning with  $^{131}\text{I}$  plays a central role in identifying a cold nodule that may need surgical extirpation and in identifying areas of abnormal radioactive iodine accumulation after total thyroidectomy. The following case illustrates the use of  $^{131}\text{I}$  in papillary carcinoma of the thyroid.

Following a sore throat, this 51-year-old man discovered a lump in his throat that was scanned and found not to concentrate radioactive iodine. He was thought to have thyroiditis and was placed on thyroid and aspirin. Six months later the lump was larger and was still "cold" on  $^{131}\text{I}$  scan. Surgery and frozen section revealed a mixed papillary and follicular carcinoma of the thyroid, and a total thyroidectomy was performed (lymph nodes were not observed). Five weeks later he was scanned (Fig. 1) and found to have abnormal accumulations of  $^{131}\text{I}$  in his neck and chest. The chest x-ray was normal. A treatment dose of 100 millicuries of  $^{131}\text{I}$  was administered and the patient was placed on cytomel for 10 weeks. Then cytomel was stopped for two weeks and he was rescanned (Fig. 2). Significant improvement was noted. He was placed on dessicated thyroid for six months and then was taken off thyroid medication for six weeks. After becoming hypothyroid he was rescanned and no abnormal accumulation of  $^{131}\text{I}$  was noted

#### $^{131}\text{I}$ IODINE THERAPY OF THYROID CANCER

WHOLE BODY

HEAD & NECK

CHEST

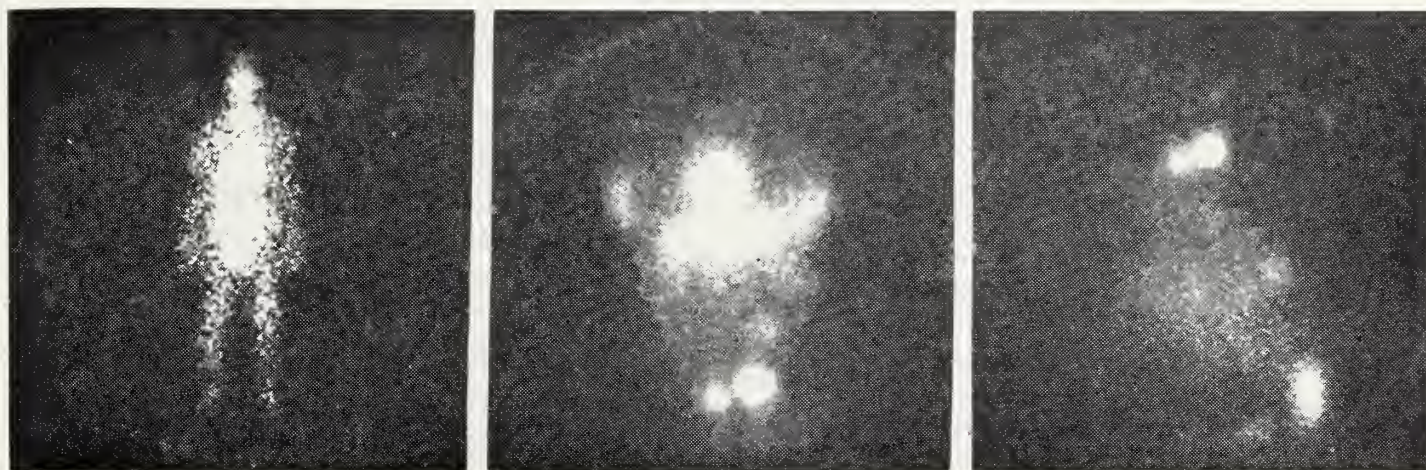


FIG. 1—September 1972

Whole body scan shows abnormal localization of isotope in neck & chest. Head and neck scan shows three hot spots in neck plus salivary gland localization. Chest scan shows two hot spots in chest plus localization in stomach and in neck.



## <sup>131</sup>IODINE THERAPY OF THYROID CANCER

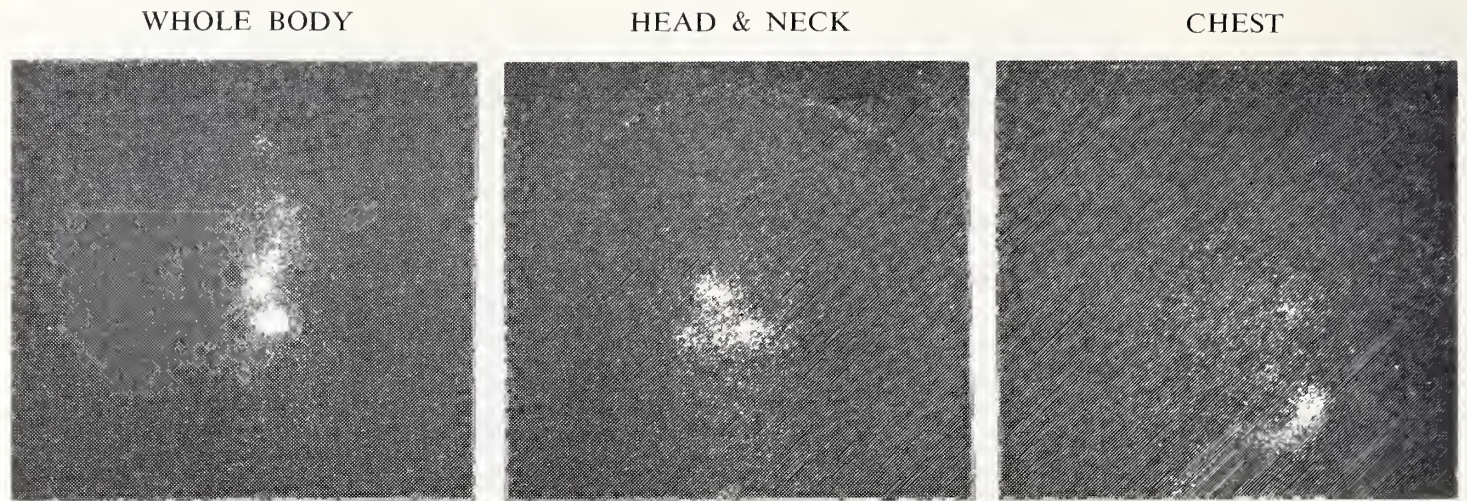


FIG. 2—December 1972

Whole body scan shows abnormal localization of isotope only in chest. Head & neck scans shows no abnormal localization of isotope (hot spots are normal salivary glands). Chest scan shows localization in stomach and two areas of the chest.

## <sup>131</sup>IODINE THERAPY OF THYROID CANCER

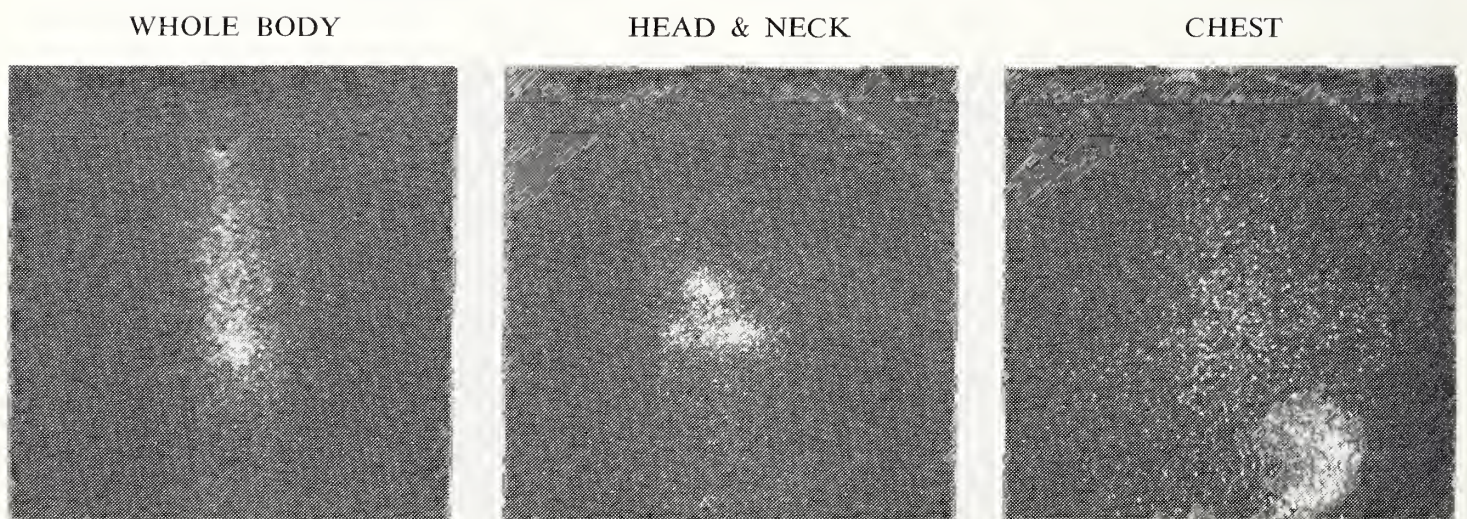


FIG. 3—June 1973

No abnormal localization of isotope.

(Fig. 3). The patient was discharged with instructions to return at yearly intervals until it was determined by scan that he was free of tumor for three consecutive years.

In this case <sup>131</sup>I fulfilled its role in identifying a cold nodule, in identifying metastases after total thyroidectomy, and in successfully treating the patient. Patients with well differentiated carcinoma of the thyroid usually have a more benign course if they are under age 40. Survival rate in patients over age 40 is 4 times greater in patients treated with surgery and radioactive iodine than in patients treated with surgery alone.<sup>1</sup> Cooperation between the

surgeon and nuclear medicine specialist is necessary for the best patient care. If at surgery an occult sclerosing papillary carcinoma of the thyroid is found, it is not necessary to do a total thyroidectomy because of the very benign nature of that lesion. If a nodule reveals papillary or follicular carcinoma on frozen section, then total thyroidectomy and removal of obvious nodes is indicated. Resection of sternocleidomastoid muscle is not necessary. When the patient becomes hypothyroid (in five or six weeks) then a whole body scan should be done with <sup>131</sup>I. Stimulation with endogenous TSH



is maximal then. Exogenous TSH is both unnecessary and occasionally may even be dangerous. In selected cases, uptake of radioactive iodine by tumor may be enhanced if the patient is placed on a diuretic for a few days.<sup>2</sup> Since normal thyroid concentrates radioactive iodine better than tumor, surgical removal of the entire thyroid gland prior to therapy is highly desirable if one wishes to maximally reduce the total amount of radiation administered to the patient. Pregnant women and nursing mothers should not be given radioactive iodine. If there are extensive pulmonary metastases, external irradiation should not be given along with radioactive iodine because of the danger of pulmonary fibrosis. Complications of <sup>131</sup>I therapy are rare, but do occur (Fig. 4). While success in

eradicating papillary and follicular carcinoma of the thyroid is excellent even when pulmonary and neck metastases are extensive, it is significantly more difficult to eradicate the tumor once it has metastasized to bone. The induction of thyroid tumors and other malignancies has not been increased by radioactive iodine therapy for thyroid cancer.<sup>3</sup>

#### REFERENCES

1. Varma, VM, Beierwalter, WH, Nofal, MM, et al, Treatment of Thyroid Cancer, *JAMA* 214:1437, 1970.
2. Hamburger, J, Diuretic Augmentation of I-131 Uptake in Inoperable Thyroid Cancer, *NEJM* 280: 1091, 1969.
3. Beierwalter, WH, Treatment of Hyperthyroidism and Thyroid Cancer with I-131, *Northwest Med* 63: 871, 1964.

FIG. 4

#### COMPLICATIONS OF <sup>131</sup>I THERAPY FOR THYROID CANCER

- 1) Radiation Sickness (Next A.M.)
- 2) Thyroiditis (Massive in a few hours; slight in 4-6 weeks)
- 3) Sialadenitis (Metallic taste; hours to months)
- 4) Cystitis (In a few days)
- 5) Sterility (Its occurrence is questionable)
- 6) Cytopenia
  - Lymphocytes (May drop in a few hours)
  - Leukocytes (1 week)
  - Red cells and platelets (When patient is myxedematous)
- 7) Pulmonary Fibrosis
  - Do not give concomitant X-Ray therapy



# TENNESSEE VALLEY MEDICAL ASSEMBLY

(Sponsored by the Chattanooga and Hamilton County Medical Society, Inc.)

THE READ HOUSE, CHATTANOOGA, TENNESSEE

Monday, October 1, and Tuesday, October 2, 1973

## 21ST ANNUAL ASSEMBLY

*SUNDAY, September 30, 1973—6:30 p.m.*

SPEAKERS RECEPTION

Continental Room, Read House

*October 1, 1973—MONDAY, Read House*

JOHN T. QUEENAN, M.D., Louisville, Ky., "AMNIOTIC FLUID ANALYSIS FOR INTRAUTERINE DIAGNOSIS"

J. TAYLOR WHARTON, M.D., Houston, Texas, "SURGICAL PROCEDURES ASSOCIATED WITH RADIATION THERAPY FOR CERVICAL CANCER"

JOHN M. FLEXNER, M.D., Nashville, Tenn., "MANAGEMENT OF MALIGNANT LYMPHOMAS"

RALPH E. JOHNSON, M.D., Bethesda, Md., "THE NEED FOR COMBINED APPROACHES IN CANCER THERAPY"

ROBERT D. COLLINS, M.D., Nashville, Tenn., "CRITERIA FOR CLASSIFICATION OF MALIGNANT LYMPHOMAS"

12:30 p.m.

MONDAY LUNCHEON SYMPOSIA  
Ballroom, Read House

—LYMPHOMAS—

JOHN M. FLEXNER, M.D.  
RALPH E. JOHNSON, M.D.  
ROBERT D. COLLINS, M.D.

Moderator: Winston P. Caine, M.D.

12:30 p.m.

—OB-GYN—

J. TAYLOR WHARTON, M.D.  
JOHN T. QUEENAN, M.D.

Moderators: Peggy Howard, M.D., and W. Powell Hutcherson, M.D.

13 Hours (prescribed), American Academy of Family

Practice Continuation Study credits

770

*October 2, 1973—TUESDAY, Read House*

Continental Room

Christian Medical Society Breakfast

Speaker: J. LAWTON SMITH, M.D., Miami Florida

*October 2, 1973—TUESDAY, Read House*

GEORGE C. MORRIS, JR., M.D., Houston, Texas, "PERSONAL EXPERIENCE WITH 2000 PATIENTS HAVING CORONARY ARTERY BYPASS"

JAY S. GOODMAN, M.D., Baltimore, Md., "COMMON ANAEROBIC INFECTIONS: PRACTICAL ASPECTS"

J. D. MILLAR, M.D., Atlanta, Ga., "ATTACKING TODAY'S VENEREAL DISEASE CRISIS"

J. LAWTON SMITH, M.D., Miami, Fla., "THYROID EYE DISEASE"

JAMES D. HARDY, M.D., Jackson, Miss., "THORACIC ANEURYSMS: DISSECTING AND NONDISSECTING"

12:30 p.m.

TUESDAY LUNCHEON SYMPOSIUM  
Continental Room, Read House

—VASCULAR SURGERY—

GEORGE C. MORRIS, JR., M.D.  
JAMES D. HARDY, M.D.

Moderator: David P. Hall, M.D.

JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION



## PROTEINURIA (II)

For investigation of the fractional composition of urine protein constituents, the two most commonly employed techniques are simple electrophoresis, and immunoelectrophoresis. Generally both require concentration of the urine, ideally by a technique which does not cause protein denaturation and subsequent distortion of the protein patterns. Comparison with the patterns of normal urine controls offers the most reliable interpretative data.

In broad terms, the pathological proteinuria of renal disease is often divided into "glomerular" and "tubular" patterns. The former result from abnormal glomerular permeability, with albumin representing generally 50% or more of the total protein. "Selective" proteinuria refers to predominant albuminuria with the presence of relatively small quantities of high molecular weight globulin components; in "non-selective" proteinuria increased excretion of these larger molecules is seen. In practice, proteinuria of varying degrees of intermediate selectivity is frequently encountered. Regardless of etiology, it is felt that the greater the selectivity the more benign the glomerular disease and the better the therapeutic response, especially in children. Non-selectivity indicates a greater degree of glomerular damage and, accordingly, a worse prognosis.

"Tubular" proteinuria, on the other hand, is believed to reflect a defect in tubular reabsorption of filtered proteins, and may be seen in a variety of tubulo-interstitial diseases. This pattern is characterized by minimal albuminuria (usually 5-20%) and the presence of distinct  $\alpha$ ,  $\beta$ , and  $\gamma$ -globulin fractions of slightly altered electrophoretic mobility. The presence of associated abnormal glomerular permeability will, of course, alter this typical pattern.

Of more specific diagnostic interest is the proteinuria encountered in the monoclonal gammopathies, such as multiple myeloma. In such patients, the abnormal serum immunoglobulin is generally not present in the urine in the ab-

sence of abnormal glomerular function (e.g. glomerular amyloid deposition), but approximately 60% of such patients will excrete certain immunoglobulin fragments (Bence Jones proteins) in the urine. Although these proteins may be detected by simple urine electrophoresis, they, as well as other primary immunoglobulin constituents excreted in certain pathological conditions which will be mentioned, are best detected by immunoelectrophoresis or an agar-gel diffusion technique. Bence Jones proteins correspond to the "light chain" portions of the immunoglobulin that is being produced by the proliferating clone of plasma cells, and usually migrate in the  $\beta$ - $\gamma$  region. The presence of these proteins in serum is unusual and often occurs only when severe renal impairment develops during the course of the disease. Bence Jones proteinuria has been correlated with the development of "para-amyloidosis" and some workers feel that the specific type of Bence Jones protein present may correlate with the development and severity of renal disease and the response of the myelomatous process to therapy.

Two other instances of pathological globulinuria should be mentioned. Occasionally, and particularly in cases of lupus erythematosus, free light chains may be found in the urine. These are "polyclonal" and as such do not have the clinical implications of the monoclonal Bence Jones proteins. Indeed, although there appear to be patients with "benign" Bence Jones proteinuria, this condition generally implies the presence or subsequent development of a malignant neoplastic process. Finally, in "heavy chain disease," portions of the heavy chain components of the immunoglobulin molecule may be found in serum and urine. Though a rare entity, this disease appears to fit into the same spectrum of neoplastic conditions of the lympho-plasmacytic system that encompasses myeloma and macroglobulinemia. The presence of this urinary protein is largely of importance in diagnosis, as the prognostic and therapeutic implications, if any, of "heavy chain proteinuria" have yet to be elucidated.

DEAN G. TAYLOR, M.D.

From the Department of Pathology, Methodist Hospital, Memphis, Tenn.





## continuing education opportunities

*The continuing medical education accreditation program of TMA, after receiving provisional approval for one year, has as of June 22 been granted full approval for a period of 4 years by AMA's Council on Medical Education. If the continuing medical education program of your hospital or medical society is accredited by TMA's committee, you may receive for your attendance at its functions Category 1 credit for the AMA Physician's Recognition Award. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee 37203.*

### Meharry Medical College CME Course

The following continuing education course is being offered by the Meharry Medical College during 1973:

November 3      Radiation Technology, Learning Resources Center

### Vanderbilt University CME Courses

Date	Title, Location, Program Coordinator
Sept. 19-21	Endocrinology (American College of Physicians) Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.
Sept. 26-28	The Injured Child (American Academy of Orthopedic Surgeons) Underwood Auditorium, Vanderbilt, John Connolly, M.D.
Oct. 10-12	Hypertension (American College of Cardiology) Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.
Oct. 25-27	Child Neurology, Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

### Fourth Annual Autumn Pediatric Symposium

The Fourth Annual Autumn Pediatric Symposium at Vanderbilt University will be held October 27, 1973 with the topic being Pediatric Endocrinology—DIAGNOSIS AND MANAGEMENT OF COMMON PROBLEMS.

Guest faculty will include Dr. Melvin Grumbach, Chairman of the Department of Pediatrics, University of California at San Francisco and Dr. Robert Stempfel, Chairman of the Department of Pediatrics, University of California at Davis.

For information write Ian M. Burr, M.D., Depart-

ment of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tennessee 37232.

### American Board of Family Practice Sets Certification Exam Date

The American Board of Family Practice announces that it will give its next two-day written certification examination on October 20-21, 1973. It will be held in various centers geographically distributed throughout the United States. Information regarding the examination can be obtained by writing Nicholas J. Pisacano, M.D., Secretary, American Board of Family Practice, Inc., University of Kentucky Medical Center, Annex #2, Room 229, Lexington, Kentucky 40506.

It is necessary for each physician desiring to take the examination to file a completed application with the Board office. Deadline for receipt of applications at the Board office is August 1, 1973.

### National Health Council Offers Short Courses

The National Health Council, through its Committee on Continuing Education announces ten short courses in 1973 selected for personnel of official, professional, and voluntary health agencies and organizations.

The course subjects will include: Comprehensive Health Planning, Consultation Skills, Community Organization in Health Care Services, Executive Development, Leadership Development, and Voluntary Health Agency in the Community.

The ten courses will be conducted by seven universities on various dates through August 1973. Co-operating universities are: Columbia University (School of Public Health), University of Florida (College of Health Related Professions), George Williams College (Division of Social Work Education), Indiana University (Graduate School of Business), University of Michigan (School of Public Health), University of Oklahoma (Department of Health Administration and School of Health), and Washington University (Office of Conferences and Short Courses).

Descriptive brochures and other information on these courses may be obtained by writing to: Continuing Education Program, National Health Council, 1740 Broadway, New York, New York 10019.

### Annual Otolaryngologic Assembly October 20-26, 1973

The Annual Otolaryngologic Assembly of 1973 will be held October 20-26, 1973, in the Eye and Ear Infirmary of the University of Illinois Hospital. The Department of Otolaryngology of the Abraham Lincoln School of Medicine, University of Illinois at the Medical Center, offers a condensed basic and clinical program for practicing otolaryngologists under the



direction of Emanuel M. Skolnik, M.D., with Burton J. Soboroff, M.D., as co-chairman. This program is designed to bring to specialists current information in medical and surgical otorhinolaryngology.

Interested otolaryngologists should direct their inquiries to the mailing address: OTOLARYNGOLOGY, P. O. Box 6998, Chicago, Ill. 60680.

\* \* \* \* \*

A separate, but correlated course, "CONFERENCE ON RADIOLOGY IN OTOLARYNGOLOGY AND OPHTHALMOLOGY" will be held this year on Friday and Saturday, November 23 and 24, under the guidance of Galdino E. Valvassori, M.D. For further information about the radiology conference, write to Professor Valvassori, Radiology Department, Abraham Lincoln School of Medicine, P. O. Box 6998, Chicago, Illinois 60680.

### **Course in Laryngology and Bronchoesophagology**

The Department of Otolaryngology, Abraham Lincoln School of Medicine of the University of Illinois and the Eye and Ear Infirmary of the University of Illinois Hospital, will conduct a continuing education course in Laryngology and Bronchoesophagology November 12 to 17, 1973. The course is limited to twenty physicians and will be under the direction of Paul H. Holinger, M.D. It will be held largely at the Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, and will include visits to a number of other Chicago hospitals.

Interested physicians will please write directly to the Department of Otolaryngology, Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, Illinois 60612.

### **The 1st Invitational Symposium On the Sero-Diagnosis of Cancer**

The 1st Invitational Symposium on the Sero-Diagnosis of Cancer co-sponsored by the Laboratory Service, Naval Hospital, Bethesda, the College of American Pathologists (CAP), the American Society of Clinical Pathologists (ASCP), and the Armed Forces Radiobiology Research Institute (AFRRI), will be held Saturday 29 September 1973, in the Naval Hospital Auditorium, National Naval Medical Center, Bethesda, Maryland 20014.

Wet workshops in methodology under the auspices of the ASCP will be offered the day preceding or following the symposium. The Symposium papers will be divided into three major categories: Enzymes in the Sero-Diagnosis of Cancer, Unique Antigenic Systems in the Sero-Diagnosis of Cancer, Glyco-Protein Correlations in the Sero-Diagnosis of Cancer.

A registration fee of \$40 will include attendance at the symposium, parking, noontime luncheon and a copy of the proceedings. Advanced registration is required.

For further information, including a copy of the complete program, information on nearby hotels and workshops, write: Symposium, College of American Pathologists, 1775 K Street, N.W., Washington, D.C. 20006; Telephone: (202) 466-2121.

## **Symposium on Gynecological Malignancy**

The 1973 Walter L. Thomas Symposium on Gynecological Malignancy and Surgery will be held at Duke University Medical Center, Durham, North Carolina on September 21 and 22, 1973. The two day symposium will be clinically oriented with the main emphasis on "Biological and Immunological Aspects of Gynecological Malignancies" and "Pelvic Infections." It is designed for the practitioners in Obstetrics and Gynecology.

Inquiries should be addressed to W. T. Creasman, M.D., Director of Gynecologic Oncology, Post Office Box 3079, Duke University Medical Center, Durham, North Carolina 27710.

## **Second National Conference on Cancer Of the Colon and Rectum**

The Second National Conference on Cancer of the Colon and Rectum, sponsored by the American Cancer Society, will be held September 27-29, 1973 at the Americana Hotel, Bal Harbour, Florida.

This conference will present up-dated information by leading authorities in epidemiology, pathogenesis, etiology, host factors, detection, diagnosis, treatment and rehabilitation in cancer of the colon and rectum.

Contact: Sidney L. Arje, M.D.  
Second National Conference on  
Cancer of the Colon and Rectum  
c/o American Cancer Society  
219 East 42nd Street  
New York, New York 10017

## **University of Kentucky CME Courses**

Sept. 21-22 "Nephrology for the Practicing Physician" will be held at the U.K. Medical Center. Program Chairman: Dr. Robert G. Luke. Registration fee: \$40.00. Seven (7) hours of AAFP credit have been requested.

Oct. 1-3 "Changing Concepts and Methods in the Practice of Cardiology: The Obsolete and Old-Fashioned vs Modern and Advanced" will be held at the University of Kentucky Medical Center. Program chairman: Borys Surawicz, M.D., University of Kentucky and Charles Fisch, M.D., Indiana University. Registration fee: \$100 for members of the American College of Cardiology; \$125 for non-members of the College.

Oct. 7-13 The Fourth Family Medicine Review will be held at the U.K. Medical Center. Program chairman: Frank R. Lemon, M.D. Registration fee: \$185. 54 hours of AAFP credit has been requested.

For further information contact Ronald D. Hamilton, M.D., Director, Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.



**Interstate Scientific Assembly:  
Oct. 29-Nov. 1**

The 58th Annual Scientific Assembly of Interstate Postgraduate Medical Association will be held at the Palmer House, Chicago, October 29-November 1. This meeting, primarily designed for Family Physicians and Internists, is an educational service open to any

licensed M.D. or D.O. in the U.S. and Canada. The fee is \$25 in advance or \$40 at the meeting, consisting of 24 hours of "live" television, lectures, symposia, medical movies and informal discussions.

Details are available from Alton Ochsner, M.D., Program Chairman, Interstate Postgraduate Medical Association, P. O. Box 5445, Madison, Wisconsin 53705.

\* \* \*

**OCCUPATIONAL LUNG DISEASES**

AUGUST 27-31

University of Tennessee Medical School, Memphis  
Course Principal: Harry Davis, M.D.

This course is designed for physicians having an interest in industrial medical practice and will be presented by the University of Tennessee Medical School. Occupational lung diseases, including cancer of the respiratory system, were selected as they represent the most serious and long-term disabling occupational diseases.

Subjects to be covered include etiology clinical signs and symptoms, roentgenographic interpretations and the international system of roentgenogram classification, pathology, pulmonary function evaluations, and medical control.

Tuition: \$250.00. Deposit of \$25 necessary along with name, address, and telephone number. Balance due on arrival. Each course limited to 40 trainees. Certificate of completion will be awarded at the end of the course. For further information contact Dr. Davis (901) 527-6641 ext. 154.

\* \* \*

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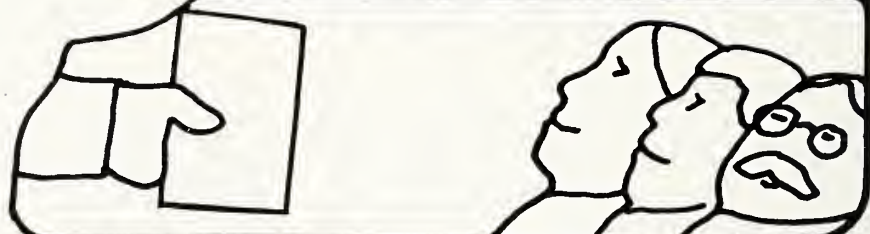
Next programs are:

Aug. 31-Sept. 2

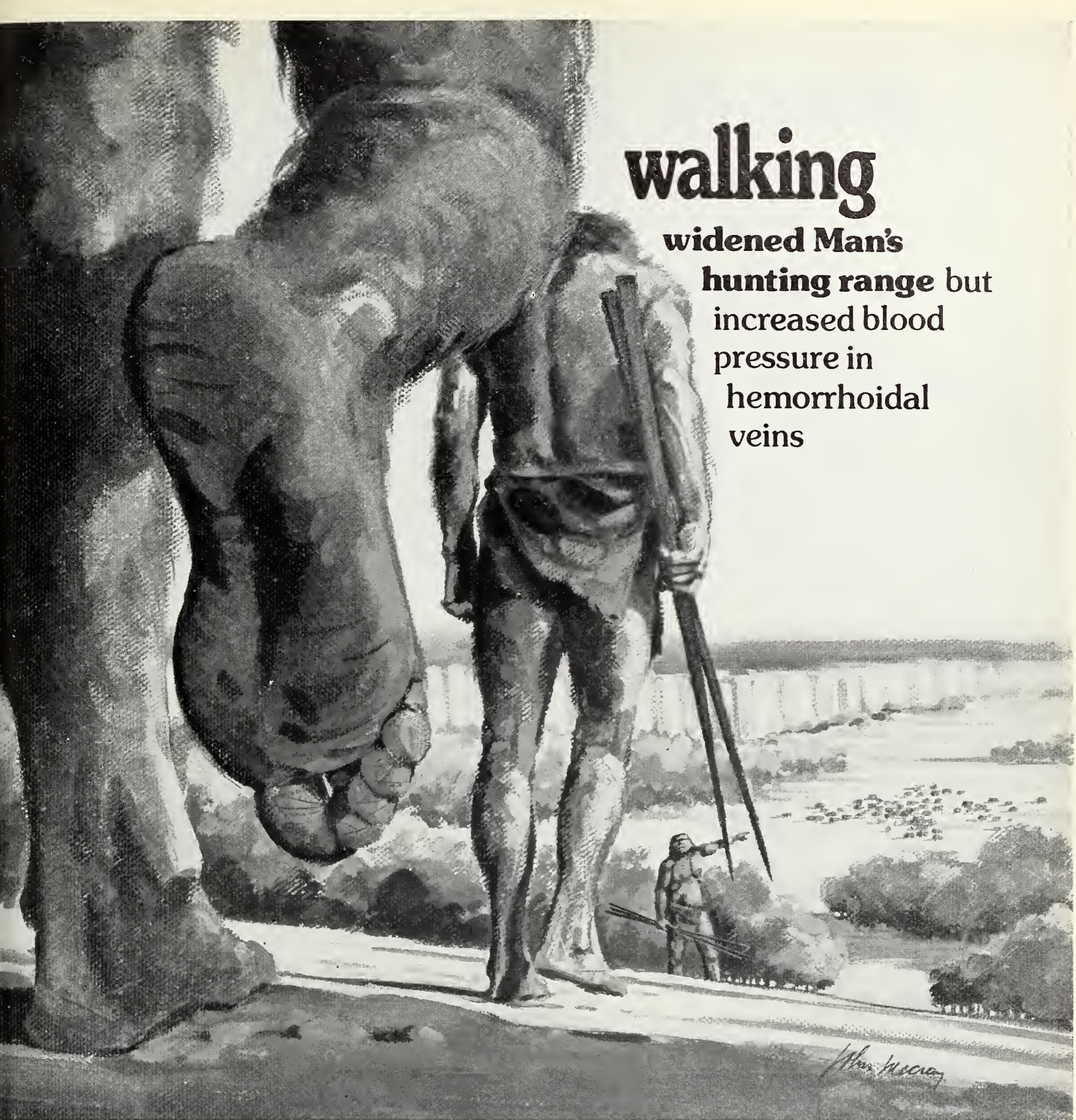
Oct. 26-28

Nov. 16-18

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## *Decreasing Risk of Coronary Cineangiography*<sup>†</sup>

HARRY L. PAGE, JR., M.D., and W. BARTON CAMPBELL, M.D.\*

The increasing use and acceptance of left heart catheterization with selective coronary cineangiography during the past few years has had an important impact on the understanding and management of patients with ischemic heart disease. Obstructive coronary artery disease is the most common and most deadly disease in the United States. Attempts to define the etiology and prevent the development of coronary atherosclerosis have thus far produced few tangible clinical results. The most rewarding efforts at the present time are therefore concerned with the definition of established disease or symptom complexes and the choice of appropriate therapeutic management. Toward this goal, the use of numerous "non-invasive" diagnostic methods needs no defense. These methods include history and physical examination, routine blood studies with lipid profile, resting and stress electrocardiography, vectorcardiography, phonocardiography with time intervals, echocardiography, etc. In the final analysis, however, nothing has surpassed our sense of vision and a picture remains "worth ten thousand words." Increasing experience with coronary cineangiography is teaching us many things. For example, we are learning that the use of the term "angina pectoris" as a specific diagnosis is no more valid than the use of the term "fever" as a specific diagnosis. "Angina pectoris" simply means pain in the chest, a term which unfortunately has been considered synonymous with obstructive coronary artery disease. The actual existence, severity and

distribution of obstructive lesions creates a wide spectrum of individualized problems, requiring individualized management. Twenty-five to thirty per cent of patients studied by coronary cineangiography have normal studies. Many of these patients have been managed as though they had life threatening heart disease, and by inclusion in the population of patients treated for "angina pectoris," obscure meaningful statistics regarding the effects of any form of medical or surgical treatment.

Coronary cineangiography has been responsible for the development of effective coronary artery surgery. Although statistical validation of increased longevity and quality of life is not yet available, those working daily with coronary artery surgery have few doubts regarding its effectiveness. The pertinent problems to be solved concern selection of patients for surgery and the development of a grading system for comparison of results of surgical and medical treatment among similar patient populations. For example, the results of a single bypass of a tightly obstructed proximal anterior descending artery in a young man with otherwise normal coronary arteries, a normal left ventricle and crescendo angina cannot be compared with a triple bypass in a similarly symptomatic older patient with diffuse coronary artery disease and impaired left ventricular function due to previous myocardial infarctions. In this example, one good and one not so good result could be interpreted as a 50 per cent success rate, a conclusion which ignores an important basic concept; namely, the two patients are not comparable. Essential to such an analysis is the information derived from coronary cineangiography. Reluctance on the part of some phy-

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sicians to have patients studied by coronary cineangiography has stemmed from many sources including unfamiliarity with the subject, personal prejudices regarding propriety of "medical" and "surgical" treatment of virtually any disease and perhaps more realistically from the fact that a definite risk of morbidity and mortality is associated with the procedure. It is the purpose of this paper to review our experience with coronary cineangiography at St. Thomas Hospital during the past five years with emphasis on morbid complications and to document a decreasing incidence of such complications as experience and new procedural information have accumulated.

The cardiac catheterization laboratory at St. Thomas was reorganized and relocated in the hospital in early 1968. From February 1, 1968 to April 20, 1973, 2,300 coronary cineangiograms have been performed by a total of seven cardiologists. Although the training and total catheterization experience of the various cardiologists has differed, attempts to provide a friendly atmosphere for communication and consultation, weekly catheterization conferences, a well trained nursing and technician staff and association with fellows in training has tended

to standardize techniques so that the per cent of morbid complications among operating physicians has shown no gross disparity.

Complications will be considered as they relate to the patient's continued state of health and not to the specific organ system involved. The following classification is employed.

1° = Death occurring with temporal relationship to suggest the procedure as the responsible or precipitating event.

2° = Residual functional damage following catheterization (usually cerebral vascular accident or myocardial infarction).

3° = Morbidity associated with the procedure, but no residual functional damage (usually femoral artery thrombectomy or brachial arteriotomy revision).

4° = Threatening event adequately controlled with no resultant morbidity. (Ventricular fibrillation reverted by DC shock, contrast reaction, etc.)

The first two categories can thus be considered "major" and the last two as "minor" complications.

Figure 1 contains a breakdown in yearly statistics.

FIG. 1

YEARLY COMPLICATION RATE—2,300 CORONARY CINEANGIOGRAMS\*

	Total Procedures	1°	2°	Major	3°	4°	Minor	Total
1968	45	2.2 % (1)	0%	2.2 %	4.4 % (2)	4.4 % (2)	8.8 %	11.0 %
1969	144	1.39% (2)	1.39% (2)	2.78%	2.08% (3)	1.39% (2)	3.47%	6.25%
1970	357	0.28% (1)	1.40% (5)	1.68%	3.64% (13)	1.12% (4)	4.76%	6.44%
1971	601	0.50% (3)	0.83% (5)	1.33%	2.16% (13)	0.83% (5)	2.99%	4.32%
1972	812	0.37% (3)	0.25% (2)	0.62%	1.11% (9)	0.12% (1)	1.23%	1.85%
1973**	341	0%	0.29% (1)	0.29%	0.59% (2)	0.29% (1)	0.88%	1.17%

\*Numbers in parenthesis are actual number of patients.

\*\*As of April 20.

## DISCUSSION

It is no longer necessary to defend the use of coronary cineangiography as a useful, practical diagnostic tool. It is necessary, however, for physicians actively engaged in the procedure to communicate freely in order to increase diagnostic yield and to lower risks to the patient. Current literature states that an acceptable

mortality rate from coronary cineangiography should approach 0.1% although a combined Veterans Hospital survey reports a 2.4% mortality with the transfemoral approach.<sup>1-2</sup> The only possible explanation for a twenty-four-fold disparity of results lies not in the surgical approach, but in the manner in which it is per-

*continued on page 818*



# The Decreasing Risk of Aortocoronary Bypass\*

CLARENCE S. THOMAS, JR., M.D., WILLIAM C. ALFORD, JR., M.D.,  
GEORGE R. BURRUS, M.D. and WILLIAM S. STONEY, M.D.

Aortocoronary saphenous vein bypass grafting has become an established procedure in the treatment of severe forms of angina pectoris and of coronary artery obstruction considered to be a threat to life. The decision to utilize this procedure in the treatment of a patient with ischemic heart disease must be predicated upon a knowledge of the clinical course without operative treatment and of the operative results currently being attained. A major factor in this decisive equation is the risk of the operative procedure itself.

With increasing experience in many centers operative mortality of aortocoronary bypass has become minimal. At the time of writing there has been no operative or postoperative mortality following an aortocoronary bypass graft procedure performed at St. Thomas Hospital, Nashville, Tennessee, in the past 218 operated patients. It seems appropriate at this time to review the first 200 consecutive patients treated without an operative death. This study was designed to evaluate the constituency of this group and ascertain the basis for decreasing risk. It is concluded from these data that the decreased operative mortality is the result of increasing experience rather than limitation of operation to better risk patients. Furthermore, although morbidity may be significant in a procedure of this magnitude, operative mortality need no longer be considered a major deterrent in patients undergoing aortocoronary bypass.

## MATERIALS AND RESULTS

Between February 18, 1969 and April 15, 1973, 773 patients underwent aortocoronary bypass graft procedures at St. Thomas Hospital, Nashville. This series excludes only four early patients operated upon for advanced cardiogenic shock secondary to myocardial infarction. Of the total there have been 21 hospital deaths for an overall mortality rate of 2.7 percent. The first 200 consecutive patients without a hospital mortality have been analyzed to ascertain

the symptoms which led to their initial referral, the type of operative procedure performed, and the presence of risk factors which might have altered the expected mortality.

The symptoms leading to coronary arteriography and subsequent surgical therapy in the 200 patients analyzed are listed in Table 1. Although stable angina pectoris is listed

TABLE I  
PRESENTING SYMPTOMS IN 200  
CONSECUTIVE PATIENTS

Stable angina pectoris	95
Crescendo angina pectoris	67
Coronary insufficiency	18
Congestive heart failure and angina	9
Post infarction angina	5
Coronary artery stenosis with valvular heart disease	3
Arrhythmia	2
Evaluation after two infarcts	1

as the most frequent indication for aortocoronary bypass (95 patients), the vast majority of these patients were known to have developed progression of their symptoms in the months prior to study. Crescendo angina pectoris, the presenting symptoms complex in 67 patients, is defined as rapid progression of symptoms within the three months prior to study. The majority of these individuals presented with angina decubitus as well as severe effort angina. Coronary insufficiency, or so-called pre-infarction angina, seen in 18 patients, is herein defined as severe and prolonged angina pectoris in patients hospitalized to exclude myocardial infarction. Emergency coronary arteriography and early operative intervention were performed during the initial hospitalization. It is significant that over 40% of the patients presented with unstable forms of angina pectoris.

Five patients presented with unrelenting angina decubitus for two weeks to two months following a documented myocardial infarction. Seven of the nine patients with congestive failure in addition to angina pectoris under-

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went resection of ventricular aneurysm in conjunction with aortocoronary bypass.

Seventeen of the 200 patients underwent bypass grafting in conjunction with another procedure. Fourteen of these had resection of ventricular aneurysm and three had prosthetic valvular replacements. Of the remaining patients, 39 were treated with single vein bypass, 65 with double vein bypass, 65 with triple vein bypass, and 14 with quadruple vein bypass. Only 19.5 percent of patients, therefore, underwent single vein bypass grafting alone.

An analysis of apparent risk factors was revealing. In no patient was there failure to construct bypasses to more than one major obstructed coronary vessel. Thirty-one of the 200 patients were 65 years of age or older. Twelve patients presented with 75 percent or greater stenosis of the left main coronary artery. Thirty-one patients showed marked decrease in left ventricular contraction in at least two of the three major myocardial segments.

### DISCUSSION

The role of aortocoronary bypass is best established in the treatment of patients with stable angina pectoris not responding to medical therapy. Clinical improvement following operation has been seen in 80-90 percent of patients. Total relief of angina pectoris has been effected in 50-60 percent.<sup>1</sup> These results have been achieved with a continually decreasing operative risk. Most centers with a large experience currently report an operative mortality of less than 5 percent.<sup>2</sup> The very low recent mortality and overall mortality reported herein will probably not long be unique.

The current analysis indicates that increasing experience has resulted in substantial increase in referral of patients not for symptoms of stable angina, but rather for unstable and crescendo symptoms. In these individuals progressive symptomatology is felt to be premonitory to significant clinical deterioration or myocardial infarction. Studies establishing the degree of risk with medical therapy in the presence of unstable angina pectoris are not yet complete. Twenty to forty percent of patients with severe angina decubitus and coronary insufficiency progress to frank myocardial infarction or death within days to months following onset of symptoms.<sup>3</sup> Less stringent criteria for unstable or crescendo angina produce a lower but significant incidence of myocardial infarc-

tion and death.<sup>4</sup> Unfortunately, data available for the results of medical therapy alone in the treatment of unstable angina does not include arteriographic documentation of the disease process. As a result, patients without significant coronary lesions and patients with obstructions of very minor arteries are included in most medical management reports.

Decision for operation is based upon correlation of symptoms with the presence of documented significant proximal coronary artery stenosis. This approach would appear to encompass the patients at real risk suggested initially by symptoms alone. The objective is clearly preservation of myocardium and prolongation of life. The long-term statistical support for this concept is not yet validated. The first step in the chain is documented herein—survival of operation.

Perusal of risk factors in the 200 consecutive patients reported suggests that this was not a uniquely low risk group. Combination of resection of ventricular aneurysm and coronary bypass has been previously considered a procedure of considerable magnitude. An improved repair<sup>5</sup> and simultaneous revascularization of jeopardized myocardial segments has improved survival as well as the hemodynamic result. The mortality of prosthetic valve replacement in conjunction with coronary bypass, accomplished in three of these patients, has been reported as high as 23 percent<sup>6</sup> although currently less in most centers.

Multiple vein bypass grafts in each patient are clearly the rule. Overall experience does not show a linear increase in risk with increasing numbers of bypasses (Table II). On the contrary the close correlation between the number of obstructed vessels and the number of grafts performed signifies an effort to revascularize as completely as possible in each patient. This concept is felt to be a major contributor to survival and the best possible longterm results.

Thirty-one of the 200 patients were 65 years of age or older. Increasing age, however, has not been a major contributor to operative mortality. Mortality in the group as a whole does not increase significantly with advancing age (Table III). These results are predicated upon careful selection of more elderly individuals based chiefly on their current level of physical activity and cerebral function.

Significant stenosis of the left main coronary



TABLE II  
CORONARY ARTERY BYPASS GRAFTS

Single Bypass		Deaths	
Alone	177	0	
With Associated Procedure	44	1	
Total	221	1	
Double Bypass			
Alone	335	12	
With Associated Procedure	32	3	
Total	367	15	
Triple Bypass			
Alone	165	5	
With Associated Procedure	1	0	
Total	166	5	
Quadruple Bypass			
Alone	18	0	
With Associated Procedure	0	0	
Total	18	0	
Quintuple Bypass			
Alone	1	0	
With Associated Procedure	0	0	
Total	1	0	
Total Patients 773			
Total Hospital Deaths 21 (2.7%)			

TABLE III  
RISK OF AORTO-CORONARY BYPASS BY AGE

Age	Number	Mortalities	Percent
30-39	42	1	2.4
40-49	209	5	2.4
50-59	333	10	3.0
60-69	162	4	2.5
70-79	27	1	3.7

artery is the most ominous lesion that can be defined by coronary arteriography. Untreated severe stenosis of the left main coronary artery has a relatively bleak prognosis.<sup>7</sup> Operative mortality in this lesion has been reported as high as 31 percent<sup>8</sup> and as low as 11<sup>9</sup> to 12<sup>10</sup> percent. The twelve patients with this lesion operated upon in this group followed a post-operative course analogous to the remaining patients with no particular perioperative problem.

An increasing operative mortality with diminished ventricular function has been established. The treatment of congestive heart failure from ischemic heart disease without ventricular aneurysm has produced a high mortality and limited clinical improvement.<sup>11</sup> The

31 patients selected for aortocoronary bypass in this group in spite of very severe depression of ventricular function manifested either a large localized ventricular aneurysm in addition to other areas of dysfunction or satisfied criteria described by Mundth.<sup>12</sup> These criteria are the presence of significant angina pectoris, suggesting viable although ischemic muscles, the presence of only intermittent episodes of congestive failure, and the presence of very adequate distal vessels for bypass. The early results of this approach have been rewarding.

It is concluded from this analysis that the patients currently submitted to aortocoronary bypass grafting procedures at our institution are clearly not a low risk group. In contrast, they, for the most part, represent patients with a rapidly progressive history and complicated multiple coronary artery lesions. It is this group of patients who stand to gain the most from direct myocardial revascularization. It is quite fortunate that these procedures can be accomplished with an ever-decreasing risk to life.

## SUMMARY

Aortocoronary bypass has been accomplished in 773 patients at St. Thomas Hospital, Nashville. No postoperative death has occurred in the last 218 of these patients. The first 200 consecutive patients without postoperative mortality are analyzed. This analysis shows that an increasing number of patients are referred for ominous progressive symptoms rather than uncomplicated stable angina. Significant risk factors were present in a large number of patients. Single bypass alone was performed in less than 20 percent. It is concluded that decreasing mortality is related to increasing experience with a careful effort to revascularize all jeopardized myocardial segments.

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\* \* \*

## The Decreasing Risk . . .

*continued from page 814*

formed. We believe that the majority of major complications employing the transfemoral approach have related to dislodgment of embolic material into the central circulation and to overzealous repetition of injections of severe main left coronary lesions. As these problems have been identified, changes in technique have decreased their frequency. It would seem fair to state that in an environment where surgical and diagnostic risks are minimized, the "risk" of managing a patient with suspected obstructive coronary artery disease in the absence of essential information on which to base therapeutic decisions, far outweighs the "risk" of obtaining the information.

It is beyond the scope of this report to discuss in detail the nuances of technique which have improved our own complication record, but, in brief, they have included proper catheter-guide

wire technique, early recognition of main left coronary artery lesions, minimization of procedure time and appropriate systemic heparinization. Without doubt our own laboratory is indebted to a competent, highly motivated staff of nurses and technicians who have converted a potential flirtation with disaster into a pleasant routine diagnostic study, the outcome of which profoundly affects the continued well being of our patients. Toward this goal of increasingly better patient care we will continue to expose our faults, seek advice from those whom we respect and teach those who come to us to learn.

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# *On Continuing Medical Education*

WILLIAM F. MEACHAM, M.D.

Medicine, in the Middle Ages, entered a period known as a "thousand years of darkness"—a period in which the early scientific methods of Hippocrates and Galen gave over to sorcery and mysticism. Such practice continued until an unusually perceptive monarch, Frederick II of Salerno, deemed it necessary to regulate the practice of medicine in a manner reminiscent of contemporary concern for the public health. By Frederick's ukase, a doctor (the term being used for the first time to designate a member of the medical profession) who wished to practice must first pass an examination so that, "the king's subjects should not incur danger through the inexperience of their physicians." It was specified further that a five year training course followed by a year's apprenticeship was necessary. In a truly modern ring, it also was declared that a doctor must not form a partnership with an apothecary, in the event he should be tempted to prescribe too many or too expensive drugs. For the first time, also, governmental agents were charged with inspecting the purity and quality of medicines offered for sale—a reminder of our own federally operated food and drug control. A century later, Henry V of England laid down strict regulations for the practice of "physic," stating that all who practiced must be examined for competence at the university, obtain a degree, or risk punishment by the Privy Council.

From such ancient beginnings, a system of controls of medical practice has evolved that has become a complex process of academic divisiveness, inefficiency and, for the most part, completely inept in determining true competency. However, the licensing of physicians by each state medical board has tended to separate the true physician from the quacks and cultists who, alas, still flourish in this enlightened age of scientific achievement. In spite of state licensure, the quality of medical practice was a matter of individual pride and self-discipline. In earlier days in this country, a doctor could practice essentially as he pleased and could "specialize" in any field he desired by self-labeling, restrained only by his own conscience as to what he would undertake. Ultimately, organized medicine and local and state medical societies composed a code of professional and

ethical behavior that proved admirable on paper, but left to local option the distasteful task of weeding out the incompetent—something that was done rarely—doctors being loathe to "blow the whistle" on a confrere, except in the most blatant instances of misconduct. Then came the state licensing examinations for all medical school graduates—an examination designed to eliminate the incompetent, but which, in reality, has acted as a perfunctory test of basic scientific knowledge and which everyone seems to pass with ease, except perhaps in those resort area states where the examination may be employed as a device to keep out the "seasonal" practitioner.

Obviously then, another method of regulatory controls was needed, particularly after the development of surgery as a growing complex of separate specialties. Recognizing the need for some method by which the public could be provided a uniform standard of excellent medical care, it was realized that this could be carried out best by setting standards for the hospital care of patients. As an altruistic venture, this was carried out first in 1918 by the American College of Surgeons who, on a purely voluntary basis, would inspect and accredit hospitals which met certain standards of staff performance, equipment, services, and educational facilities. After a few years, however, the burden of continuing the hospital accreditation program overtaxed the financial and staff resources of the College and the Joint Commission on Accreditation of Hospitals was formed to take over this responsibility. The standards for accreditation set by this body has resulted in improved hospital educational and service functions throughout the nation for several years and deserves praise for its efforts in behalf of better patient care and for improved hospital medical staff educational facilities. This body now is under legal attack by consumer groups who demand paid for representation on the JCAH with veto powers regarding accreditation decisions.

From these early beginnings, medical education in America has become a veritable hodgepodge of organizational linkages that almost defy individual understanding. Most of us have had to accept, without fully realizing why, the



approval of our medical schools by one body, the hospital by another, the internship and the residency by others. Understandably, this has created a situation in which power plays conceivably could effect an important role in controlling medical practice. As a portion of my presidential address to the Society of Neurological Surgeons, I undertook the task of unraveling some of the complexities of the educational process today as it might apply to a potential neurosurgeon, and I shall summarize it here briefly. Consider, then, if you will, the "flow pattern" of educational progression of the college graduate who aspires to a neurosurgical career:

- 1) He must graduate from a medical school accredited by the Liaison Committee for Medical Education, composed equally of members appointed from the Council on Medical Education of the American Medical Association and the Association of American Medical Colleges.

- 2) He must pass a licensing examination prepared and given by the state board for professional licensure.

- 3) He must intern in a hospital approved by the Internship Review Committee, appointed by the Council on Medical Education of the American Medical Association.

- 4) He must serve a neurosurgical residency of four or more years in a training program approved by the Residency Review Committee for Neurological Surgery, composed of two members from the American Board of Neurological Surgery, two members from the Council on Medical Education of the AMA, and two members from the American College of Surgeons.

- 5) The hospitals in which he performs as intern and resident must be accredited by the Joint Commission on Accreditation of Hospitals, composed of representatives from the American College of Physicians, the American College of Surgeons, the American Medical Association, and the American Hospital Association.

- 6) If he wishes to be certified as a neurosurgeon, he must pass a written examination (after 1972) composed by the American Board of Neurological Surgery in conjunction with the National Board of Medical Examiners, and after two years of practice, pass an oral examination given by the American Board of Neurological Surgery, which is official by virtue of being a member of the American Board of Medical

Specialties—the parent organization of all official boards!

The complexities of such an arrangement are apparent immediately and the potential for conflict of interest, internecine jealousies, and rivalries are inherent. It is a real tribute to the conscientious motivation of all who are involved in this awkward system that it has worked so well, thus far! The Millis Commission report described it as a system of shuttling responsibilities so constituted that it is unlikely that anyone would design from the beginning a system of such diffuseness and complexity.

As one result of the Millis report, a restructuring of the entire process of medical education is currently in progress. It is important for us to know that contemporary concepts of medical education recognize three facets of the learning program. One consists of education at the medical school level and for which a *Liaison Committee for Medical Education* exists. Another concerns itself with the education of interns and residents and for which a *Liaison Committee for Graduate Medical Education* exists, and, finally, a third group, the *Liaison Committee for Continuing Medical Education*, has just been formed and is concerned with the administration and conduct of medical education for all who have completed formal training. These three bodies, to keep up with the alphabet salad now in vogue, are known respectively as the LCME, the LCGME, and the LCCME. These three liaison committees will operate under the administrative control of a *Coordinating Council for Medical Education* which will be composed of appointees from the Association of American Medical Colleges, the AMA, the American Board of Medical Specialties, the American Hospital Association, the Council of Medical Specialty Societies, the federal government, and the public.

It is somewhat paradoxical that American medicine, probably the best in the world, should be under current attack and criticism for any laxity in its educational program. True, the ponderous and time-consuming process could be streamlined and made more efficient, but this possibly may occur at the expense of quality. It has seemed to most of us that medicine, as a profession, has been characterized for many decades by high ideals, personal motivation, and the pursuit of excellence. The stigma of mediocrity has been thrust upon us only recently by medicolegal vultures and self-appointed con-



sumer snoopers who are all too willing to stigmatize an entire profession because of the shortcomings and misbehavior of a few. We find ourselves now in the midst of a peculiar situation in which, according to a recent poll, the average citizen finds no fault with *his* doctor, but is quite ready to complain about the profession as a whole, due, no doubt, to the rising cost of health care which also is laid at the doorstep of our profession. It is unfortunate that it has become a popular hobby for some to harp and carp at our profession and to exploit the mistakes and foibles of a few in such a way as to indict us all.

We recognize that health care is a right and not a privilege and it behooves us to see to it that such care not only is possible, but available. As an important part of our continuing education, doctors are learning more than "just medicine." We are learning the nuances that create professional liability situations that result in punitive action against the doctor. The plaintiff's attorneys have "taught" us to practice defensive medicine—a brand of practice that inevitably increases costs through the use of extra diagnostic tests and x-rays, and at the same time restricts our actions in the performance of new and useful techniques. We have learned also a new terminology—emanating from the minds of the bureaucrats—a doctor is a "provider of health care"—a patient is now a "consumer." Instead of going to the doctor, a "consumer" now "gains entry into the health care system." We have learned that the public is concerned over what we long have known—that some doctors have not "kept up," that some are rascals, that some do unnecessary operations solely for money, and that we have been delinquent in many instances of doing our own professional house cleaning. All of these features, and more, concern us and our response to this adverse public sentiment has been to counter accusation with facts and figures usually relegated to the "back pages" by the same media which "front pages" the accusation.

In this rather chaotic situation between the public and the profession, it has become apparent that the hue and cry has resulted in a growing awareness that a need for *documentation* of continued intellectual input is to become a fact, and may be required by government if not self-imposed by the profession. In such an event, relicensure could become a weapon of government and specialty recertification become

a weapon of the profession. It is easy to visualize the effect on a professional career if either or both of these devices are turned toward punitive uses. It is this threat that has prodded us into a consideration of various systems that will forestall the mandatory relicensure or recertification requirement, not as a method of appeasement, but as an attempt to create a continuum of the learning process because it is inherently worthwhile.

Dr. William Mayo long ago advocated continuous education for all surgeons in his Fellowship address to the American College of Surgeons in 1929 through the auspices of the College. There are now multidisciplinary symposia, panel discussions, surgical forum research papers, and postgraduate courses. Along with the scientific programs of national societies, there are other innovative educational devices and plans currently in effect or in some stage of development, practically all of which attempt to improve the cognitive realm, rather than the affective or psychomotor areas of learning. It is part of our responsibility as teachers to create an appetite for learning and through the programs of our national organizations to expedite the opportunities for continued education.

If we assess what is currently available, we will find a surprising number of projects for the motivated individual to utilize in his self-improvement program. The time-honored method of perusal of medical literature has certain value, but the volume of today's scientific literature is such that one must be quite selective in his choice or he will embroil himself in a hopeless task of reading constantly and probably retaining little.

Refresher courses are currently popular and are serving a limited need for those who wish to learn new technique or to "brush up" on a specific field. Courses that emphasize practical aspects by the performance techniques are probably of greater value than the purely didactic methods. It has been said of the latter that the notes of the instructor are transferred to the notes of the student without passing through the minds of either!

The area of audio-visual technology has influenced our concepts of continuing education since by video tape or sound tape, an entire meeting can be recorded and preserved for dissemination or a symposium or panel discussion on a single subject can be made part of an audio-visual library to be revised and re-edited as



needed. Most of the panel discussions of the American College of Surgeons now are being made available as "Clinitapes" which are audio only, but can be purchased cheaply and played on any cassette type machine.

Another important aspect of contemporary education for the practicing specialist concerns his standing in relationship to his peers. This self-evaluation or self-assessment movement has value in pointing up the specific weakness of an individual and may offer some guidelines toward the direction his self-improvement should take.

The American College of Surgeons has made available a program known as the Surgical Education and Self-Assessment Program (SESAP). This is an examination taken on basic surgical knowledge applicable to all surgical specialties, computer graded, with correct answers given on the grade sheet for all questions missed. Over 12,000 now have taken SESAP I, and SESAP II is scheduled for 1974. The College has recognized that the implications from such a project may have a direct bearing on a possible recertification program whether organized within the profession or imposed from outside sources—perhaps the federal government.

Whether or not we shall go to a system of "Brownie Points" for an individual's involvement in the continuing education scheme is being considered, but thus far, the consensus of most is that we should not recommend this at present. There are, however, strong sentiments in favor of such a system, especially if we are

to be required to document such activities on an official basis.

We need to remember that the public is demanding a degree of excellence never before overtly expressed. Recently, the Insurance Department of the Commonwealth of Pennsylvania circulated a pamphlet entitled "A Shopper's Guide to Surgery" or "Fourteen Rules on How to Avoid Unnecessary Surgery". An opening statement in this document points out that you cannot "place blind trust in our system of medical care," and that "you are placing undue trust in our medical care system if you assume one doctor is as good as another," and "many doctors, some 15,000 nationally, are licensed but unfit to practice medicine." As a tribute to our system of accreditation and certification, the article indicates that the safest and best surgeon is apt to be one who has graduated from an approved medical school, trained in an approved internship and residency program, is certified by his specialty board, who practices in a hospital accredited by the Joint Commission, and whose current surgical practice is not composed of so-called "remunectomies."

I am sure that if we conscientiously tend to our patients' needs cooperate with our colleagues, and maintain an effort to stay abreast of current scientific advances, then we have nothing to fear from public or governmental intrusion into the conduct of our specialty. Perhaps Satchel Paige, the ageless pitcher, said it best: "Don't never look behind you—somebody might be gaining on you."

\* \* \*

### **Clinical Center Study of Immune Deficiency Diseases**

The cooperation of physicians is requested in the referral of patients with ataxia-telangiectasia for a study being conducted by the National Cancer Institute at the Clinical Center, National Institutes of Health in Bethesda, Md.

Ataxia-telangiectasia is characterized by cutaneous and conjunctival telangiectasia, cerebellar ataxia, and recurrent respiratory infections. At the Clinical Center a full evaluation of the immunologic, neurologic and endocrinologic status of the patients will be made.

A full and prompt report of all studies done as well as recommendations for therapy will be sent to referring physicians.

In appropriate instances, therapy will be undertaken after consultation with the referring physician.

Physicians interested in having their patients considered for admission to this study may write or telephone:

WARREN STROBER, M.D.  
National Cancer Institute  
Building 10, Room 4N114  
Bethesda, Maryland 20014  
Telephone: (301) 496-6781



### HISTORY

The patient is a 5½-year-old female who has had cyanotic heart disease since birth. Poor feeding, sweating, dyspnea, and cyanosis were noted in the first few weeks of life, and murmur was heard at the age of six weeks. A diagnosis was made by cardiac catheterization at age two months. The child was digitalized and did well except for several bouts of bacterial pneumonia in infancy. Subsequently, her condition improved, and her activity level was nearly normal. The digitalis was stopped. In the six months prior to the current evaluation, she complained of recurrent bitemporal headaches, frequent leg and arm cramping, and decreasing exercise tolerance. Her hematocrit has remained elevated at approximately 55%.

Present physical findings included mild cyanosis with clubbing of the fingers and toes. Cardiac examination revealed a hyperactive PMI with a ventricular heave in systole. The rhythm was regular. S<sub>2</sub> was loud and did not split. There was a grade 2/6 holosystolic blowing murmur at the cardiac base without radiation, and a systolic-diastolic crescendo-decrescendo murmur was heard over the posterior lung fields. The latter

murmur was loudest to the right of the spine posteriorly at approximately T-3. There was an aortic opening snap at the cardiac base. The remainder of the physical examination was essentially normal. An electrocardiogram at this time showed right axis deviation at approximately +120°, P pulmonale and right ventricular hypertrophy.

### X-Ray Findings:

The cardiac series show cardiomegaly, up-turned cardiac apex, concave main pulmonary artery segment, large aorta, irregular posterior impressions on the esophagus at the level of the carina, and pulmonary hypervascularity. The main right and left pulmonary arteries are not seen, but normal appearing peripheral pulmonary arteries are identified. In some areas the pulmonary vessels have a disorganized, reticular pattern which is felt to be bronchial artery supply to the lungs. (Figure 1).

### Differential Diagnosis:

- I. Lesions with cyanosis and increased pulmonary vascularity:
  - A. Complete transposition of the great vessels.
  - B. Persistent truncus arteriosus.
  - C. Common ventricle.
  - D. Origin of both great vessels from the right ventricle.
  - E. Total anomalous pulmonary venous connection.
  - F. Common atrium.
  - G. Cor Biloculare.
  - H. Tricuspid atresia with transposition.
  - I. Tricuspid atresia without pulmonary stenosis.
  - J. Tetralogy of Fallot with pulmonary atresia (pseudotruncus arteriosus) and large bronchial artery collaterals or large patent ductus arteriosus supplying the pulmonary arteries.
  - K. Any lesion with pulmonary atresia or severe pulmonary stenosis in which a systemic to pulmonary shunting operation has been performed.
- II. Posterior esophageal indentations:
  - A. Aberrant subclavian artery.
  - B. Vascular ring.
  - C. Large bronchial artery collaterals to pulmonary arteries.
  - D. Impression by intrapulmonary or mediastinal mass lesion.
  - E. Intramural esophageal mass lesion.

### Angiocardiographic Findings:

A right ventriculogram (Figure 2) reveals a ventricular septal defect, pulmonary atresia (note blindly ending outflow tract of the right ventricle), hypertrophy of the right ventricle, and an overriding aorta. Continuity between mitral and aortic valves is shown. This finding rules out transposition of the great vessels and origin of both great vessels from the right ventricle.<sup>1</sup> An aortic injection (Figure 3) demon-

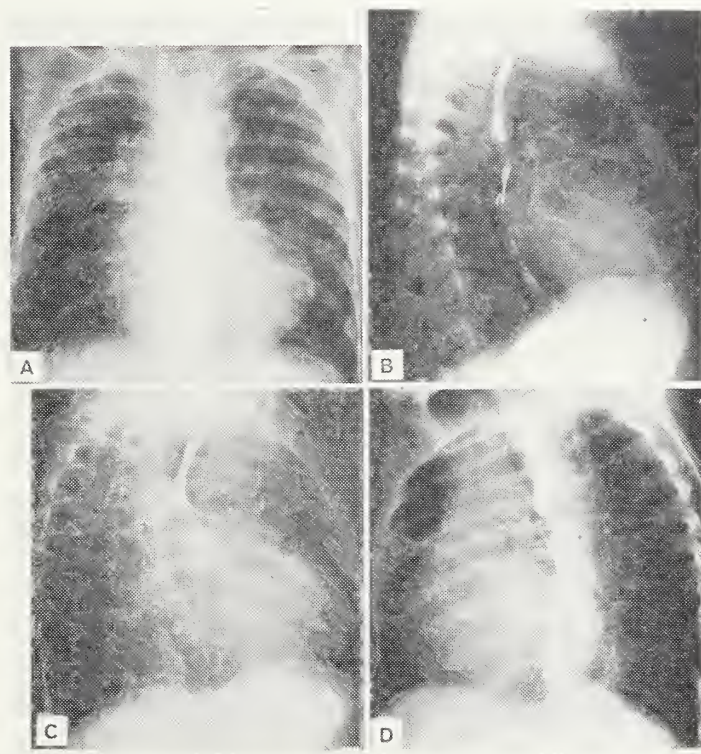


FIGURE 1. Cardiac series. A., PA view. B., Lateral view. C., Right anterior oblique view. D., Left anterior oblique view. Bronchial arteries are seen best on the PA view.

From the Department of Radiology, Vanderbilt University School of Medicine, Nashville, Tenn., 37232.



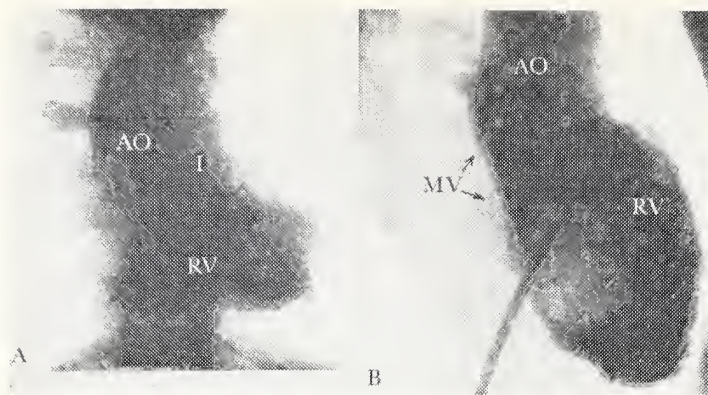


FIGURE 2. PA (A) and Lateral (B) views of right ventriculogram. AO = aorta. RV = right ventricle. I = blindly ending right ventricular outflow tract (infundibulum). MV = anterior leaflet of mitral valve. Contrast has reached the left ventricle via a ventricular septal defect and outlines the anterior mitral leaflet. Note the anteriorly placed (overriding) aorta and the continuity of the mitral and aortic valve annuli in (B).

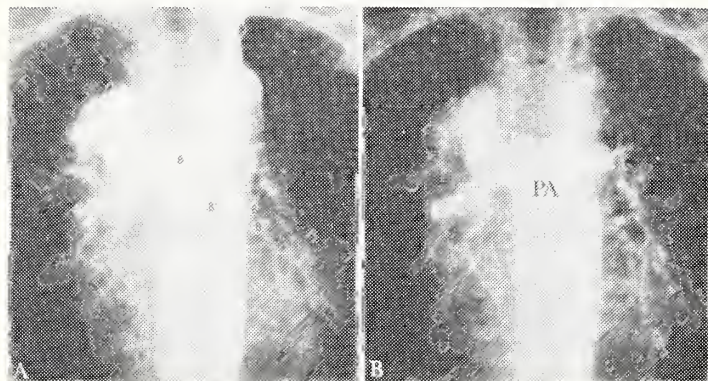


FIGURE 3. Thoracic aortogram. Early (A) and late (B) films. B = bronchial arteries originating from the descending aorta. PA = pulmonary artery opacified by bronchial artery collaterals.

strates large bronchial arteries which provide collateral to the pulmonary arteries and reconstitute the main pulmonary artery. The large bronchial arteries coincide with the posterior esophageal indentations. Neither an aberrant subclavian artery nor a vascular ring is demonstrated.

#### Diagnosis:

Tetralogy of Fallot with pulmonary atresia (pseudotruncus arteriosus). Large bronchial collaterals to the pulmonary arteries indenting the posterior esophagus.

#### Discussion:

Plain film findings of cardiomegaly with an upturned cardiac apex (suggesting right ventricular enlargement), concave main pulmonary artery segment, and evidence of bronchial artery supply to the lungs (posterior impressions on the esophagus and reticular pulmonary artery

patterns) are pathognomonic for Tetralogy of Fallot with pulmonary atresia or truncus arteriosus type IV.<sup>2</sup> In truncus arteriosus type IV, no pulmonary arteries are formed. The blood supply to the lungs is entirely via bronchial arteries.<sup>2</sup> Pulmonary arteries are present in Tetralogy of Fallot with pulmonary atresia, and they receive collateral blood flow from bronchial arteries or a patent ductus arteriosus.<sup>5</sup> Demonstration of a ductum arteriosus, pulmonary arteries, or a blindly ending right ventricular outflow tract on the angiogram rules out a type IV truncus.<sup>4,6</sup>

Increased pulmonary arterial vascularity is uncommon in truncus arteriosus type IV and Tetralogy of Fallot with pulmonary atresia, but can occur when the bronchial artery collaterals to the lungs are large.<sup>6</sup> The disorganized, reticular pulmonary artery pattern, which is characteristic of bronchial arteries, may be difficult to recognize on plain films. Identification of bronchial arteries is an invaluable aid in determining pathophysiology since it indicates a marked reduction in blood flow to the lungs via the pulmonary artery. An absent pulmonary artery, pulmonary valvar atresia or severe stenosis should be suspected.<sup>2</sup>

When there is pulmonary hypovascularity in Tetralogy of Fallot with pulmonary atresia, angiocardiology is necessary to differentiate it from Tetralogy of Fallot (with pulmonary stenosis) as well as from truncus arteriosus type IV.<sup>2,6</sup> A right aortic arch is said to be more common in pseudotruncus arteriosus than in Tetralogy of Fallot.<sup>6</sup>

The remaining cyanotic congenital heart diseases with increased pulmonary arterial vascularity listed in the differential diagnosis do not have bronchial artery collaterals to the lungs except in rare cases in which there is concomitant pulmonary stenosis or atresia. They could be excluded from serious consideration on this basis. Historically, this child had no systemic to pulmonary artery shunting procedure to account for the increased pulmonary vascularity.

Etienne Fallot in 1888 reported a series of cases with ventricular septal defect, overriding aorta, hypertrophy of the right ventricle and pulmonary stenosis or atresia.<sup>3</sup> A distinction between cases with pulmonary stenosis and those with pulmonary atresia was not made by Fallot. Physiologically, the lesions are distinct since cases with pulmonary stenosis have a pathway

*continued on page 827*



## Radioimmunoassay

The use of radioimmunoassay (RIA) as a laboratory method for the quantitation of substances present in very small amounts in biological fluids has become extremely popular. Much has been written about this technique in recent years, and the number and types of substances that can be investigated by RIA has grown tremendously since the principle was first popularized. This principle employs the ability to make specific antibody to a number of (serum) substances, which then can be quantitated in an immunological test system.

Basically, the method requires three essential components: 1) unlabelled antigen (the substance to be assayed in the biological fluid, usually serum), 2) radiolabelled antigen (the same antigen but "tagged" with a radioactive label and supplied as part of the test system), and 3) specific antibody to the antigen. A fixed amount of antibody and labelled antigen is mixed with the biological fluid, or an extract thereof, which contains the unlabelled antigen. The labelled and unlabelled antigens then "compete" with each other for the binding sites on the antibody molecules. The greater the amount of unlabelled antigen present, the more binding sites it will "take up," displacing the labelled antigen, and thus the greater the quantity of labelled antigen that will be "free" (or unbound) in the test solution.

After an equilibrium is reached, one of several methods can be used to separate the free (unbound) and bound antigen, and the radioactivity in each fraction can be measured. The greater the amount of original unlabelled antigen in the test sample, the more antibody binding sites it will occupy, and the greater will be the amount of labelled antigen existing "free" in solution; consequently there will be proportionately greater radioactivity in the "free" portion of the system than in the "bound" portion. If, along with the test sample, a series of standards containing known amounts of unlabelled antigen are run simultaneously, a standard curve can be constructed plotting "free" radioactivity

(or "bound" radioactivity, or a ratio of the two) against concentration of the unlabelled antigen. By then seeing where on this curve the value for the radioactivity of the unknown sample falls, its serum concentration can be read off the graph.

A similar principle is often referred to in general as "competitive protein binding" assay, indicating the use of a test system in which the binding protein is not an antibody as such but rather a binding protein that is relatively specific for the substance being quantitated (for example, intrinsic factor used in quantitation of serum vitamin B<sub>12</sub> levels). An additional important technique utilized in enhancing the versatility of the RIA method is the ability to make antibody to substances not normally antigenic themselves by attaching them to a larger molecule which is antigenic, such as albumin, and injecting this complex into the animal used as the source of antibody. Thus, by using either this latter technique, or by employing a binding protein which is not a specific antibody, many small and intrinsically non-antigenic substances can now be determined by these methods (e.g., digoxin, steroid hormones).

Several general classes of substances can now be determined by these methods: 1) hormones, both peptide and steroid type, 2) non-hormonal proteins (enzymes, immunoglobulins, tumor-associated antigens, etc.), 3) therapeutic agents (cardiac glycosides), 4) drugs of abuse (morphine), 5) essential biological substances such as vitamin B<sub>12</sub> and folic acid, 6) miscellaneous substances—hepatitis B antigen (Australia antigen), toxins, metabolites, etc.

The advantages of the RIA and competitive binding methods over chemical methods of analysis are several, including greater speed and simplicity, greater accuracy, extreme sensitivity even into the nanogram (billionth of a gram) and picogram (trillionth of a gram) ranges, and specificity. Some disadvantages include the need for relatively expensive instrumentation, the need for meticulous laboratory technique, and the relatively high cost of the reagents and commercially available test "kits". However, as

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## Why Treat Hypertension?\*

*Physicians have become increasingly aware that hypertension is one of the greatest causes of death and disability in America. In recent years considerable emphasis has been placed on hypertension research, and hypertension recognition and control has been assigned a high priority on the national health scene.*

*HYPERTENSION REVIEWS is a publication of the Hypertension Center, Vanderbilt University School of Medicine, and will appear monthly in the JOURNAL, presenting up-to-date synopses of pertinent topics in the field of hypertension.*

*The initial article entitled "Why Treat Hypertension" is by Clifton R. Cleaveland, M.D., internist from Chattanooga, Tennessee, who specializes in the treatment of hypertensive diseases.*

The rationale for the treatment of malignant hypertension became apparent soon after effective hypotensive medication was introduced. Through the use of ganglionic-blocking agents the one year survival rate of patients with malignant hypertension could be raised from the 10% level seen in an untreated group to the range of 50%. Twenty per cent of treated patients survived at least five years. As more effective, less toxic agents have become available, survival rates of such patients have edged steadily upward.

Prognosis in patients with malignant hypertension depends upon the status of renal function at the time of diagnosis. Whereas a 60-70% five year survival rate in nonazotemic patients can be expected, only 20% of azotemic subjects survive a similar period. The addition of dialysis to medical therapy has improved substantially the management of azotemic, hypertensive patients.

In patients with milder hypertension, therapy was more often based upon pharmacologic faith than upon scientific observation. Actuarial experience did define an increased mortality for individuals with relatively mild elevations of

blood pressure. Similar observations were noted by Paul Bechgaard in a lengthy follow-up of one thousand hypertensive patients. The assumption was generally made that treatment improved the prognosis for patients with mild to moderate hypertension.

Through the Veterans Administration Cooperative Study Group on Antihypertensive Agents the benefits of antihypertensive therapy in nonmalignant hypertension were clearly demonstrated. After an initial period of hospitalization for observation and evaluation, patients with essential hypertension were randomly allotted to treatment and placebo groups. The initial report detailed the effects of treatment on patients with initial diastolic blood pressures of 115-129 mm. Hg. Treatment consisted of hydrochlorothiazide, reserpine, and hydralazine. During careful outpatient follow-up, twenty-seven complicating events, including four deaths, were observed in the placebo group. Two complications occurred in the treatment group; one patient developed hyperglycemia, hypokalemia, and depression while another became hypotensive and sustained a stroke. Complications noted in the placebo group included retinal hemorrhage, azotemia, congestive heart failure, dissecting aneurysm of the aorta, and cerebral hemorrhage.

Few physicians would have argued against treatment in patients with diastolic blood pressures above 115 mm. Hg. A second report from the Veterans Administration Cooperative Study Group focused on the more troublesome question of effects of treatment in patients with even milder hypertension.

Three hundred eighty-five male hypertensives whose diastolic blood pressures averaged 90 to 114 mm. Hg. were randomly assigned to either a placebo-treated group or a drug-treated group. Treatment was shown to reduce the risk of morbidity related to hypertension from 55% to 18%. Of the thirty-five patients in the placebo group who sustained complications, nineteen died, five developed refractory congestive heart failure, and four suffered severe cerebrovascular thrombosis. An additional twenty patients developed sustained diastolic blood pressures ex-

\* From the Hypertension Center, Vanderbilt University School of Medicine, Nashville, Tennessee 37232.



ceeding 124 mm. Hg. In the group receiving drug therapy there were nine deaths and one instance of hypotension. Even in patients whose diastolic blood pressures averaged 90-105 mm. Hg., drug therapy was shown to effect a 35% reduction in morbidity.

Effective treatment of hypertension remains expensive and exposes the patient to a diversity of side-effects. Patients and physicians share a commitment for regular lifelong follow-up. Information provided by the Veterans Administration Cooperative Study Group demonstrates the overriding benefits of treatment in hypertensive patients.

CLIFTON R. CLEVELAND, M.D.

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X-Ray of the Month

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for blood to reach the pulmonary arteries from the right ventricle when the ductus arteriosus closes. When the ductus closes in Tetralogy of Fallot with pulmonary atresia, bronchial and/or intercostal collaterals to the lungs must develop rapidly or the infant will succumb. Consequently, infants with Tetralogy of Fallot and pulmonary atresia have a much poorer life expectancy than those infants who have pulmonary stenosis.<sup>7</sup>

The child that has been presented has been able to survive because of the large bronchial artery collaterals to the pulmonary arteries.

CLYDE W. SMITH, M.D. and YING T. LEE, M.D.

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Laboratory Medicine

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more of the specific determinations leave the realm of investigation and enter the armamentarium of the clinical laboratory, it is anticipated

that even greater popularity of the radio-immunoassay and competitive protein binding techniques will follow.

DEAN C. TAYLOR, M.D.



### Coronary Artery Bypass Operation: Psychological and Medical Problems\*

DR. HARRY S. ABRAM: Our patient for presentation today has had at least one myocardial infarction and two coronary artery bypass procedures. He is being evaluated by the psychiatric consultation-liaison service at the request of the cardiology division. We will focus on how he has adapted to this type of operation, as well as to his illness. Dr. Horton will first present the patient's history.

DR. FREDERICK T. HORTON, JR.: The history was obtained from interviews with the patient, his wife and a review of the chart. This is the fourth Vanderbilt Hospital admission for this 48-year-old white married man from Hopkinsville, Kentucky. He was admitted on May 10, 1973 with the chief complaint of "feeling tired" for about 3 weeks, although he stated that nothing had really gone right since his second aortocoronary bypass procedure almost a year ago (July, 1972).

According to the patient's wife, he had undergone a significant personality change during the past six months, especially during the last three months. His premorbid personality, as described by the wife was kind, devoted and considerate, and there was complete trust and openness between them. She described him as an extrovert, always wanting to be around people. She said he would "think big." At times his thinking was expansive. He would tend to exaggerate, but he didn't seem to lie. He was hard driving and always had a project with a deadline which he seemed to beat. It's interesting that he would rarely use the products of these projects. She gave such examples as building a pool and boats; but after completing them, he rarely used them.

He has a history of increased alcohol use. During the past three months he has used alcohol almost constantly and has spent several hundred dollars a month on alcohol. Recently because of his behavior and thinking there has been an increase in family and marital discord. He is suspicious of family and friends, and there is a question of paranoid ideation. He has some difficulties with his oldest son whom he feels is involved with a marijuana ring. The patient has gone to talk with the District Attorney, and at times he has followed his son around, believing that his son's life is in danger. His wife thinks that there is a thread of truth in this, but she has much difficulty distinguishing fact from fiction. He now hides his alcohol; his bank account is overdrawn, and he doesn't keep track of his checks. There is some question of inappropriate business ventures; and he habitually lies

to his wife about his alcohol, his whereabouts, visiting his local physician and having blood samples sent to Nashville.

There has been a threat of suicide. When I asked the patient about this he said that he had thought about it and that if he did commit suicide he would make sure that it was successful by using his automobile, so that his family could collect double indemnity. He has also threatened homicide, this toward the lawyer whom he feels has corrupted his son.

He complains of a sleep disturbance. He has been impotent for three months according to his wife, but he denies this. There has been a loss of interest in outside activities and an increased concern with his health. His wife stated that he was optimistic after his first bypass procedure, but since the second he has been concerned that he only has a year or so to live and will require more cardiac operations which he says he could never go through. At times he is afraid to go to sleep because he is afraid he won't wake up in the morning. Also, he complains of fatigue and lack of energy which are worse in the morning. He says that his wife "babies" him, but she states that she just tried to prevent him from harming himself. He has had four automobile accidents in the past year, and she has become concerned about his judgment when he is drinking. He says he does not want anybody to do for him what he can do for himself.

He was seen in Cardiac Clinic on October 4, 1972 in follow-up, and it was noted in the chart that there had been several calls from the patient, that the conversations were long and rambling and that he seemed to be intoxicated. It was recommended that the patient resume work, but he didn't follow this recommendation. He saw a psychiatrist in April, 1973 because of fear of loss of impulse control, specifically his impulse to kill the lawyer. The psychiatrist recommended hospitalization, but the patient refused. He was given chlorpromazine, 50 mgs every six hours, but because the combination of chlorpromazine and alcohol knocked him out he didn't continue to take the medication.

His past medical history reveals at least an 18 year history of hypertension and angina. His first myocardial infarction occurred suddenly on April 25, 1970. In 1971 he was hospitalized for a revascularization procedure. He says that he had another myocardial infarction on the operating table. When talking with me, he said that at one time he was considering a 1½ million dollar malpractice suit against the surgeons because he had evidence that they had not performed the procedure. He was hospitalized at VUH from May 29, 1972 through June 1, 1972 for medical evaluation, and he was here in July, 1972 for 22 days for his second coronary artery bypass procedure. He then returned here in August, 1972 for a febrile illness. He had another myocardial infarction on Thanksgiving 1972. He is presently on procaine amide, diazepam, isosorbide dinitrate and chlorpheniramine.

Social history: The patient was the second of six children and the oldest male. He had the "greatest parents in the world" even though they were poorly educated. They taught him that he must get an

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education and be aggressive if he was to succeed. His father died at age 57 of a myocardial infarction, and his mother died at age 76 of a myocardial infarction and diabetes. He graduated from high school in 1942 and spent three years in the Navy. He played professional baseball and moved around quite a bit.

The patient met his wife in 1949 and following a six months courtship they married. It was the first marriage for both. He stated that the marriage has been satisfactory, and she stated it was satisfactory until recently. They have three sons ages 21, 18, 14, the oldest in college. The patient worked for a manufacturing company until 1950 and was rapidly promoted from time keeper to paymaster. He then worked for the government until the end of 1968 at which time he retired with 20 years of service. He would work 16 to 18 hours a day, and his object was to get the job done regardless of how much time it might take. According to his wife he was a technician, although he stated he was an engineer. He also stated that he received his B.S. in Mechanical Engineering at the age of 39 after 12 to 13 years of taking course work on his own time. His wife stated that he took a few courses but dropped out, never completed them and never received his B.S. degree. In January, 1969 he went to work for another company as a supervisor. He stated that after six months he was promoted to Vice President of the department. He worked until his myocardial infarction in April, 1970. He had intended to return to work but because he had been off for 2 years he would have lost \$350,000 life insurance and retirement. He also stated that had he gone back to work he would have had to assume the same hard pace, and this would probably have killed him. His wife presently works and earns \$16,000 a year. In December, 1971 he bought a rundown farm for about \$47,000 and he said this provided him with a challenge. Over a period until March, 1972 he made many improvements and sold it for more than \$100,000. He stated that it was something he enjoyed and wanted, but he had to sell it because of his family. His wife stated that he just suddenly decided to sell it.

When I interviewed this man he was unshaven and disheveled, cooperative and in no particular distress or discomfort. His speech was a slow, Southern drawl, but at times it had a "thick tongue" quality as if he were intoxicated. He answered questions but tended to mumble and to wander from the topic. His overall affect was shallow or blunted; there was very little modulation in his expression. I saw no evidence of a thought disorder or hallucinations. As I mentioned before, there seemed to be paranoid ideation. He was oriented, and his remote memory was all right. He had difficulty with immediate recall, remembering only one out of three items. He was able to do calculations adequately, and he abstracted proverbs but tended to personalize them.

During this hospital stay he constantly walks around the ward, seems disgruntled and upset, and complains. At times he is off the ward, and no one seems to know where he is. There was one note stating he became very upset with the dietician about his diet, complained a lot, called the operator and wanted to

speak to the hospital administrator. Soon after his admission two fifths of whiskey were found in his room.

**DR. ABRAM:** Would you summarize the major events and aspects of this man's illness?

**DR. HORTON:** Well, he seems to have been a very hard-driving, aggressive individual who worked dependably, hard and regularly until his first heart attack in April, 1970. He seems to have adjusted fairly well after his first bypass procedure in February, 1971, but since his second bypass procedure in July, 1972 things have not gone as well. There has been disruption economically, socially, within the family and marriage and his behavior, and thinking is not what it used to be. There seems to be an even more abrupt change during the past six months and particularly three months prior to admission. He now has a depressive illness which is complicated by his cardiovascular disease and alcohol abuse.

**DR. ABRAM:** Can you comment on that, Dr. Sinclair-Smith?

**DR. BRUCE C. SINCLAIR-SMITH:** This is obviously a very complicated situation, and I am learning about it for the first time. This man was presented at our cardiac catheterization work conferences, and information of this type is unfortunately rarely presented there. What went on at the first operation I don't really know. Aortico-coronary bypass was said to have been performed yet at the second operation no evidence of the graft could be found. He must have significant arterial disease for these operations to have been performed, the aim of the procedure being to limit symptoms but we do not know its effect on the onward progression of the underlying disease.

There are two aspects of this man's story which interest me. Firstly, he is a classic Friedman Type A personality, individuals who are highly susceptible to coronary disease. Secondly, one needs to know something about his "metabolic status" and how he handles his lipoproteins, since his father died early. This currently popular bypass procedure is being presented to people as a life-saving procedure, and many of the other complex interactions, biochemical, social and personal, are overlooked.

#### INTERVIEW OF PATIENT

**DR. MARC H. HOLLENDER:** I've heard a little about your situation, but it would be helpful to hear more about it directly from you.



PATIENT: Where would you like me to start?

DR. HOLLENDER: With the present hospitalization.

PATIENT: Well, the reason I came here is because I had some blood tests run, and my doctors told me that my Ph factors were out and that there was a possibility of a sugar problem, that's one thing. Another thing I've been very nervous, very upset due to problems that I've had with my son in the past, or really since the 5th of July of last year. Up until then I never had a problem to face like I have to face today. I spent some \$17,000 to keep him out of jail. I feel I've gone as far as I can with him. It worries me, it bothers me; it makes me very nervous.

And, my wife has got to where ever since I had heart surgery the second time, she, to put it bluntly, she's been a thorn in my side. She tries to treat me like a baby, and I don't want anybody to do anything for me that I can do for myself. I don't need it. I don't need that kind of help. That's one thing. Another thing, I spent two years after I had heart surgery the first time developing a farm. I developed a farm; it kept me busy, kept my mind occupied, and I enjoyed it very much, but in order to get my family back together, I made a decision that the only thing there was for me to do was to sell the farm and try to get my family back together and try to do something for my son. Well, really and truly it didn't help. It was a waste of time, waste of effort. From that standpoint, I don't think it helped one bit. In fact, I would say it probably made matters worse, I mean as far as our relationship with one another.

Now since that time I have been thinking about what am I going to do in my spare time. I've got too much time on my hands. What do I do? I've been involved in some real estate transactions, selling some real estate and things of this nature. And, it got to the point I couldn't have a meeting with somebody as far as real estate was concerned without my wife showing up from work, from home or something like this. Now recently I had a wreck, which didn't mean anything to me; what I really mean is I had the wreck to keep from killing a bunch of people. I was arrested on DWI.

DR. HOLLENDER: Driving while intoxicated?

PATIENT: Right. I explained to the police-

man I had open heart surgery twice, and if they were going to handcuff me to handcuff me in the front not behind. Well, one of them roughed me up pretty bad. One of them hit me in the chest, and I come to find out that he wasn't even a policeman. He's what they call an auxiliary policeman. This sort of upset me. I mean I didn't do anything to get roughed up, nothing whatsoever. And, as far as I was concerned the man was nothing but a sadist.

So, really my problem stems from one thing and one thing only. I grew up in poverty, and I meant to get out of poverty. It was the one aim I had in life. I got out of poverty, but it wasn't out of not doing a job, it was from being overly aggressive. I've always been this type of person, and since I've had heart surgery this second time I haven't had the energy; I haven't had the strength to be aggressive and to be honest I've got time on my hands. I don't know what to do with it, and the first thing I know I'm liable to wind up in a bar sitting and drinking, just shooting the bull with somebody.

Here recently my wife and I got into it one night, and it was one of the very few times that my wife and I have ever had an argument. It was over money, money that I had spent in selling real estate. Well, as far as I'm concerned, my wife knows nothing about money whatsoever. She was born with a gold spoon in her mouth, and I never used any of it. It was my money. She can't see the profits. All she can see is what's going out, and I just told her very frankly that I would just sign everything I had over to her, give her everything I had and walk out, that I'd had all of it I wanted to—that I didn't want to be treated like I was being treated, that I wanted to be treated like a normal human being and no other way. I considered committing suicide that night. I wasn't going to stick a shotgun in my mouth and blow my head off, I tell you that. I would have gone up on the mountain and run my truck off if I were going to do it. It was the only time I ever considered to do it, even ever give it a thought. Because if I can't live at least a half-way normal life, I don't care about living. I mean, life to me, if you can't live a half-way normal life, it's not worth living. And I don't want somebody having to look after me all the time. I don't need it. I can take care of myself, and I know that. So I felt like the best thing I could do was to make an appointment, considering the facts that I



knew, and considering the fact that I've traveled for something like twenty years. To be very frank about it, one time I decided to try to figure up how much money I'd spent on booze and when I got to \$73,000 I quit cause I didn't want to know. So far as traveling was concerned, I traveled 35-40 weeks out of the year, and I have had an enlarged liver. I knew it some three years ago. I had a biopsy run which showed fat in the liver. My liver's out of whack now. I went to a psychiatrist, and he gave me some pills to take, and I took one of 'em and, to be perfectly honest about it, I lost all muscular control, period. I had none. I couldn't walk, I couldn't even stand. I took another one six hours later, and I had the same situation.

Well, I haven't had a real sleep pattern in years, I mean I may get up at four o'clock in the morning and go to work and even when I was working, I might get up at four o'clock in the morning and start working in my motel room or wherever I was at. I don't sleep very well, and I have nightmares quite frequently. The main reason I went to a psychiatrist was because the last nightmare I had I went in and tore all the towel racks off the bathroom walls, reached up and jerked the windows out, threw 'em in the shower stall, went back to bed, and I never knew anything about it.

DR. HOLLENDER: You actually did this during a nightmare?

PATIENT: I did this. Well, I was worried. What would I do to my family? Now, I know the first time I had heart surgery, I never had a dream that I even remembered, but they gave me hallucination drugs for several days. And, all I did was lay there and dream in technicolor.

DR. HOLLENDER: Could you recall what you dreamt about then?

PATIENT: Things that had happened to me in the past.

DR. HOLLENDER: What stood out in your dreams?

PATIENT: Well, I think one of the most important things that ever stood out in my dreams, like I said I was always a very aggressive person, I was having a meeting with a group of people when we were putting in a facility at the company plant and I went around the table, and I asked everybody what their problems were and what their solutions were. Everybody says it's impossible, can't do it, except one man. Well, I got mad and hit the table, the phone jumped off the table, and I just grabbed the table and

turned it upside down in their laps, turned around and walked out. I said you've got two hours to come up with a solution to your problems. Now that's one thing that I remember very vividly that happened.

DR. HOLLENDER: When you think about that dream what is your own idea about what you might have been saying in that dream?

PATIENT: I was re-enacting something I had done in my life.

DR. HOLLENDER: But was it at a time when you were getting answers that weren't satisfying you?

PATIENT: Yes, it was.

DR. HOLLENDER: Can you tell about that?

PATIENT: Well, see they told me—I had been in the hospital some time—they told me that I had an erratic heart beat. They didn't tell me the truth. They didn't tell me that I had a coronary attack, which I didn't appreciate at all. If they had told me the truth, fine. All they said was you've got to stay in bed for 14-17 days. Well, I know that normally you're out of bed in 3-4 days at the most, so I knew it was more than this. As far as I was concerned the doctors were lying to me.

DR. SINCLAIR-SMITH: How much pain did you have in your chest before this first operation?

PATIENT: How much pain? It all depended on how much pressure I was under and how hard I worked. I had quite a bit of pain, in fact, I had pain almost constantly. And, finally, I did have a heart attack before I had the first operation.

DR. SINCLAIR-SMITH: How much pain did you have before the second operation? You mentioned that you had built up your farm and that you had been working very hard until you sold it.

PATIENT: Yeah, but I built the farm up after I had the second operation.

DR. SINCLAIR-SMITH: How much pain did you have prior to the second operation?

PATIENT: I was having quite a bit. In fact, I would say I was having more pain then than prior to the first operation.

DR. SINCLAIR-SMITH: Were you put on a treadmill and tested before you had this operation?

PATIENT: They ran a radiographic dye study, and it showed I had a 60% blockage in the right artery. I was not on a treadmill, but



I went up and down the steps, what is it—15 or 17 times.

DR. SINCLAIR-SMITH: Did you have the pain once a day or once a week or—

PATIENT: It all depended on how hard I worked. It's hard to say how much pain I had.

DR. SINCLAIR-SMITH: Could you control the pain—

PATIENT: —by slowing down? Yes.

DR. SINCLAIR-SMITH: Was that an acceptable alternative to you?

PATIENT: No, because I had a job to do, and I had to get it done.

DR. HOLLENDER: Can you give us a little idea now about what has been accomplished during your present stay in the hospital?

PATIENT: Well, I've noticed one thing: I was very weak when I got here. In fact, I had a chest cold four or five weeks ago. I went to the doctor, and he gave me some antibiotics. I had 103 degrees temperature. When my temperature went down, I quit taking the antibiotics. I felt like I had the flu. I never did regain my strength.

DR. HOLLENDER: Do you attribute your loss of strength to any particular part of your treatment?

PATIENT: Well, one thing I think the drugs I was taking had some effect on it. Another thing, I think probably some of the drinking I was doing has something to do with it.

DR. HOLLENDER: Some of the others may wish to ask you a few questions.

DR. ABRAM: How does the future seem to you?

PATIENT: My future? Well, as far as I'm concerned I'm going back home. So far as the future is concerned to me, I mean, I don't know. I can put it this way: I don't think I could take my son going to prison. That's one thing I don't think I could take, because to me that means one thing, I've been a failure as a father, and I've offered him every opportunity in the world. Now as far as my wife is concerned, I love my wife today as much as I ever loved her, but the one thing that I want her to do is to try to let me live a normal life, as normal as possible.

DR. HOLLENDER: Have you had some discussion with her about this?

PATIENT: Well, I've had discussions with her time and time again.

DR. HOLLENDER: We've asked you a number of questions, perhaps there are some questions that you would like to ask us.

PATIENT: There's one thing I'd like to know. To begin with I don't know why I even thought about committing suicide because if anybody ever loved life, I love life. I enjoy life; I enjoy people. I think it was a fit of anger.

DR. HOLLENDER: It sounded that way. . . . We must stop at this point. It was good having this chance to speak with you. I hope things work out well for you.

## DISCUSSION

DR. ABRAM: Why don't we start with the psychological tests?

MS. CAROLE VACHER: The patient is an intellectually capable man, as is demonstrated by his verbal I.Q. of 123. He is also quite depressed and preoccupied at this time. One indication of preoccupation is that proverbs were exceedingly poorly handled. For example, to the proverb: "Don't cast pearls before swine," he stated: "Because the pearls are worth more than corn." Another indication of preoccupation was his Rorschach reaction times: he could respond very quickly (3 seconds), but he sometimes failed to attend to the task and then responded slowly (35 seconds). Such preoccupation is typically seen in depression. Furthermore, his MMPI depression score was elevated 3 standard deviations. And on sentence completions he expressed a bleak outlook, with death being imminent.

There is a quality of psychological naivete that comes out clearly on his Sentence Completions and TAT where he expresses the belief that traditional, conventional values lead to success and happiness without fail. At times he believes his own potential is unlimited. For example, in one sentence completed he stated, "My mind is fantastic." These attitudes make for an easy transition to a paranoid defense.

The diagnostic impression is of an agitated depression, with great preoccupation and paranoid tendencies. Such patients rarely develop insight and are difficult to treat psychologically. Appropriate medication and emotional support might be of some benefit.

DR. ABRAM: There wasn't test evidence of an organic brain syndrome?

DR. WARREN W. WEBB: No. His Wechsler performance subtest results are very poor, but his Bender drawings are great. His verbal scale I.Q. is just too good to regard him as organic.

DR. ABRAM: What's gone on with this man



to put him in the situation he's in now? How much of this is a characterological problem of long-standing? How much of this is more sub-acute as a reaction to his illness and his operations? Obviously, the two are intertwined. The second area of interest to us is the management of this patient now. I feel at this point his prognosis is poor. He's on a downhill course, ending in death through suicide of an active nature through an auto accident or through drinking or by pushing himself so much that he will have another heart attack. The other possibility, since he still is having a great deal of difficulty with impulse control, is homicide.

DR. HOLLENDER: The picture that we see here is common in patients who have had myocardial infarctions. The psychologists have pointed out that this man has decompensated in a particular way, but I think that the more relevant consideration is this man's way of life or his life style. I think clinically we heard a great deal about it. This man was a hard-driving, success-oriented, self-sufficient, striving kind of person. If you will, he is in many ways a shame-driven person, someone who has probably underneath—we can speculate on this—very strong needs to be taken care of that are incompatible with his sense of what is manly. He has driven hard, worked hard and this psychological picture probably combined with a strong hereditary tendency he developed a coronary thrombosis and then his pattern was broken. He could no longer maintain the feelings about himself that are so important to his own sense of emotional well-being. Then we come to the use of alcohol—the depressive side of it. The alcohol, incidentally, is partly used as a medication to forestall or overcome the depression. It is also used as a sedative. The person who cannot go to sleep because of his fear of dying or the fear that he won't wake up gets to sleep by using alcohol. I have seen this a number of times. And then with all that is going on psychologically plus the added effect of alcohol we get to see more and more paranoid ideation as a secondary phenomenon in the decompensation.

Now, in terms of the treatment of this kind of person: I have seen some of them treated with reasonable success. What the therapist must convey to these patients is a certain degree of admiration. They sense admiration, they pick it up and if they really feel it, it helps

them. Also, this man must get into something on the outside, something that will give him a sense of fulfillment or a sense of accomplishment. He complains vehemently that his wife babies him. He's probably all too tempted at times. If you work with him, you should also work with the wife to see where the best compromise is effected.

DR. ABRAM: Your comments about his wife and his overdependency are well taken. She's a very straight forward, intelligent woman who is by no means babying him. And this sounded almost pure projection on his part, that he was placing his wife in this role.

DR. HORTON: She was, I thought, legitimately concerned and quite distraught over his recent behavior.

DR. ABRAM: But she wasn't hampering him?

DR. HORTON: No, I didn't have that impression.

DR. HOLLENDER: I think the other thing that we should consider is the fact that this man today is a different man than he was, let's say, five years ago. As long as this man's patterns were working and as long as he was compensated, he could be a fine person, loved by his wife, a good father, a good provider. We see him with a characterological pattern or life style that has decompensated and he's a different person. It is important for the physician to recognize that the way he is today isn't the way he's always been.

DR. SINCLAIR-SMITH: I think he's going through the depressed-denial reaction which apparently is more acute with the Type A person because he was successful and he's not successful now, and he's threatened. Rehabilitation programs should be able to prevent this reaction, because it seems to me that if somebody had been able to reinforce this man early after his second operation much of this unhappiness may not have developed. I'd like to hear some comments about his preoccupation with his son because he's obviously a first generation successful person, and the continuity of this success is being threatened by his own illness. I'm wondering whether his suspicions of his son as a failure have made him even more depressed.

DR. ABRAM: He sees his son as an extension of himself. What is involved in the rehabilitation program?

DR. SINCLAIR-SMITH: The rehabilitation program is beginning here at the Veterans Ad-



ministration Hospital, where they're quickly finding out the high degree of depression that occurs in the immediate post-myocardial infarction period. This can be overcome firstly by wise counseling and secondly by good exercise programming. I think the old approach of incarcerating people and saying don't do this, don't do that is going by the board. So long as we can select people carefully, we can get them on their feet and point them in a positive direction. They can regain their self-respect, and I think much of this type of problem will disappear. There are an increasing number of centers around the country taking this attitude, and this is one reason why exercise is becoming so successful. Not only does it improve functioning; we don't know that it builds up collaterals, but I think there's really nothing better than exercise to take a person away from his problems and give him an outward-going attitude. Exercise is really better than alcohol. It makes the person forget.

DR. ABRAM: Now with this man, chlorpromazine gave him the feeling that he did not have the control over the situation and threw him into a panic. That's why I would be very hesitant to use medication. Also, I would be concerned about any cardiac irritability that might result from anti-depressants or phenothiazines. What about the question of this man being in the hospital?

DR. HORTON: I feel that he should be hospitalized to start his treatment. I believe there's a significant suicidal and homicidal risk. I think to get the psychotherapy going you'd have to have him in the hospital, if you wanted to use an anti-depressant like amitriptyline, to monitor his cardiovascular status, although I would like to hear Dr. Sinclair-Smith's comments on this. Also, I think there's going to be the problem of withdrawing this man from alcohol, which I don't think could be done with him as an out-patient.

DR. SINCLAIR-SMITH: I think that the important thing is to get this man on his feet. That to me would outweigh the risks of cardiac arrhythmias which could be very easily picked up by monitoring techniques. It might also be a good idea to get him into a rehabilitation program three times a week and gradually feed him into an exercise program.

MEDICAL STUDENT: You mentioned the lipid abnormality. How aggressively would you treat that and how much effect do you think that would have?

DR. SINCLAIR-SMITH: This man obviously has a significant metabolic abnormality as exemplified by his family history, hypercholesterolemia and xanthelasma, probably a Type IV. Frequently we ignore treatment of these factors which may not reverse but could delay progression of his disease. He might have avoided cardiac surgery if he could have modified his life. To me that is a much more intelligent way of doing it than going through a traumatic experience like an operation, the effects of which are not fully known.

DR. ABRAM: It's of interest that there are no psychiatric studies related to coronary artery bypass procedures as far as I know. I have heard that the incidence of psychosis is high after the operation, as high as 80%. It looks as though this man went through some form of delirium, but from a psychiatric viewpoint or from the overall viewpoint of managing a patient like this one, I think it would be important for someone to have picked up the personality conflicts in his life style. Here is a man who because of his need to succeed is going to have some problems. Let's try to get him involved and to restore his self-esteem.

DR. SINCLAIR-SMITH: I'm sure if the story had been fully known prior to his surgery, a wise physician may have tried to manage his problems in another fashion.

DR. ABRAM: Is this a man who can be followed by his family physician? Are we saying this? Or are we saying he needs psychiatric care?

DR. HOLLENDER: I think that some psychiatric care would be helpful.

DR. ABRAM: You would see him as an out-patient in conjunction with his internist?

DR. HOLLENDER: Right. I'm not recommending a very intensive or prolonged procedure, but I would suggest psychotherapy on a once-a-week basis for a period and then spacing and spanning the times that he is seen. The goal is to help him develop a better feeling about himself and to re-establish his self-esteem both through what transpires in the interaction and through helping him line up his life circumstances so that they're better designed to bring him the kinds of rewards that he had previously received.

HOSPITAL CHAPLAIN: What about Mending Hearts?

DR. HOLLENDER: Well, the key would be groups designed to fortify or increase his self-



esteem. If they take away from it at all, he won't stay with them.

DR. SINCLAIR-SMITH: Could you define a little more what you mean by shame-driven?

DR. HOLLENDER: I'm using shame-driven as contrasted with guilt-ridden. By shame-driven, I mean people who have a tremendous need to be admired. They're admiration-seeking people; shame results from failure to measure up to one's ego-ideal whereas guilt is concerned with transgressions or being bad. I could imagine that this man might kill someone and it wouldn't bother him as profoundly as failing in a business.

HOSPITAL CHAPLAIN: Shame as in humiliation?

DR. HOLLENDER: That's right.

DR. WEBB: We did pick up that kind of thing on the test data clearly. He's goal-oriented in the sense that if he doesn't make it, he is going to feel very badly.

DR. JESSE R. PEEL: I would be very reluctant to use anti-depressants on this man as an out-patient. With his alcohol abuse, I don't think he's reliable to take them accurately anyhow.

DR. ABRAM: Good point. What about something like thioridazine? Would you feel this same way?

DR. PEEL: It's safer. Because of his shame orientation, however, he'll probably regard medication as a kind of crutch which he's not going to want to use regularly.

DR. WEBB: The patient came in here today with a cigarette and he just didn't put it out. He sat there and manipulated it on and on. I

think that he is telling us that he's going to keep on with tobacco and alcohol and traveling, pushing himself on and on. I think he's telling us the same thing when he pushes his wife away: "I'm going to keep this up; I'm not interested in living if I can't live the way I've always lived."

DR. ABRAM: The question is, can we alter his way of living? Can we give him substitutes?

DR. HOLLENDER: It would be interesting to conduct a study on patients who undergo an operative procedure for coronary insufficiency. It would be fascinating to study them because we may be interfering with their dying with their boots on. "We're prolonging life for people who then exist but in fact do not live, certainly not as fully as we or they might hope they would live."

## SUMMARY

This presentation and discussion illustrate the psychological conflicts of the patient with a chronic illness and the effects of modern medical and surgical technology upon the treatment of such an illness. For this patient the needs to be successful in a material sense, independent, physically active and generally an overall "superman" were extremely threatened when he developed heart disease and subsequently required surgical cardiac intervention in the form of a coronary artery bypass procedure. In his rehabilitation and that of similar patients it is important to allow as much independence and activity as possible, encouraging an image of physical strength and prowess so important to their life styles.

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## Beginning with a Smattering

It has been stated, and accurately so, that it is impossible to impart the entire contents of medical and surgical science to the student. You cannot even impart the contents of a single subject in the curriculum. The most you can expect is to give to the student a fair knowledge of the principles of the fundamental subjects in medicine, and the power to use the instruments and methods of his profession; the right attitude toward his patients and his fellow-

members in the profession; above all, to put him in the position to carry on his education, because his education is only begun in the medical school. . . . The student does not go out a trained practitioner, a trained pathologist, or a trained anatomist, or a surgeon. Looked at from the point of view of mere knowledge, he has only a smattering.

WILLIAM H. WELCH

*Bulletin of the American Academy of Medicine*,  
11:720, 1910.





## self-evaluation quiz

### THE COOPER QUIZ\*

(answers to be found beginning on p. 882)

*True or false except as indicated.*

1. Prolactin (about which we have been reading more and more) is, in reality, a hormone secreted by the pituitary gland.
2. One of the prime actions of prolactin in man is to impair the secretion of prolactin—inhibiting factor.
3. Prolactin appears to affect several target organs; in the kidney it plays the role of a diuretic.
4. Hyperprolactinemia may be a sensitive test for the involvement of the central nervous system in sarcoidosis.
5. Beer cardiomyopathy produces its syndrome because of (lithium) (zinc) (cobalt) (manganese) in the beer.
6. The reason the mineral was added to the beer after its manufacture was that it kept the beer glasses cleaner and easier to wash.
7. In cobalt-beer cardiomyopathy, the acidosis that occurs definitely increases the mortality. When the blood lactate level is increased morphine (further increases it) (lowers it).
8. Vitamin B<sub>12</sub> is the only known material in the body that requires cobalt.
9. In the cobalt-beer cardiomyopathy cases it has been suggested that chronic alcohol intake had produced heart muscle damage and less than ideal nutrition before cobalt came into the picture.
10. Which has the greater biologic activity, insulin or proinsulin?
11. Insulin responses in lean and obese diabetic is very similar but proinsulin response was significantly greater in the lean diabetic.
12. Adult-onset diabetes (and other forms of carbohydrate intolerance) can be explained by the increase in proinsulin.
13. Rapidly progressive *Pneumocystis* infections are characterized at an early stage by symptoms indicating severe pulmonary compromise than by physical examination or chest x-rays.
14. Patients with Reiter's syndrome (severe) are apt to develop aortic insufficiency.

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\* We are indebted to William T. Snagg, M.D., Late Director of Medical Education. The Cooper Hospital, for permission to reprint portions of "The Cooper Quiz". Published monthly by the Dept. of Medical Education, The Cooper Hospital, Camden, N.J. 08103.



15. It is common knowledge that bile acids are formed by the liver, secreted into the intestine, and after assisting digestion of lipids, are reabsorbed by the intestine and sent back to the liver. About 2.0 to 4.0 gm is cycled through the intestine 6 to 10 times daily. Only a relatively small part is lost in the feces; this is approximately (1) (0.75) (0.6) (0.45) gm.
16. Bile acid elimination in the feces represents one of the major mechanisms for the excretion of the steroid nucleus from the body.
17. Cholesterol is the obligatory precursor of bile acids and the liver is the sole organ capable to doing this.
18. Bile acid biosynthesis varies inversely as the amount of bile acid transferred across the liver per unit of time. This is termed "negative feedback".
19. An interesting point about bile acid formation is that it is stimulated by reduction in the amount of bile acid in the individual but it is not suppressed when there is a bile acid excess in the diet.
20. The hypercholesterolemia that results from biliary cirrhosis and obstruction of biliary tract is the result of accelerated synthesis of cholesterol in the liver of the patient.
21. There is a cholesterol-bile acid feedback mechanism as indicated by the increase in bile acids after increased cholesterol feeding.
22. The dual function of bile salts is being a solvent for lecithin and cholesterol in bile as a solvent for insoluble dietary lipids in the intestines.
23. Bile acid secretion does not influence the volume and composition of bile.
24. Experimental surgery indicates that bile acid secretion is reduced post-operatively and does not return to normal until about two weeks after surgery.
25. If the secretion rate of bile salts is low, fat is poorly absorbed and fat-soluble vitamins are not at all absorbed.
26. Any process that interrupts the extraportal hepatic circulation (EHC) of bile salts causes the syndromes of "bile salt wasting".
27. In hepatocellular damage, bile salts synthesis is (*increased*) (*decreased*).
28. Lipolysis of triglycerides depends (among other things), on the action of two of the following. Which two? (a) lipase (b) colipase (c) peptase
29. Bile acid deficiency causes malabsorption of fats. It is noteworthy that bile acid deficiency does not cause steatorrhea.
30. Ileal resection causing bile acid malabsorption is best treated by removing long-chain triglycerides from the diet.
31. The pruritus associated with obstruction biliary disease and high levels of bile salts is not treatable except for purely symptomatic treatment.



## Platelet Studies with Chromium-51

A 74-year-old man enjoyed good health until three weeks prior to admission when he suddenly developed petechiae on both feet, lower legs, and arms. He felt well and had no other complaints. There was no history of hematologic disease or allergy. He was taking no medication. He had numerous operations years before (appendectomy, hernia repair, TUR, removal of kidney stones), with no untoward effects.

Except for petechiae over the legs, arms and lower trunk and a few old ecchymoses, the patient demonstrated no unusual physical features. Vital signs, EKG, chest x-ray, and flat plate of the abdomen were all within normal limits. Hematologic studies showed: RBC 4.69 million, Hemoglobin 13.8 grams, PCV 42, MCV 89, MCH 30, MCHC 33, WBC 13,300; Differential 86 segs, 10 lymphs, 4 monos; platelets 41,000; red cell morphology normal. Lee-White Clotting time 9 minutes. Ivy bleeding time 15 minutes. Capillary fragility positive. PTT 25 seconds. Prothrombin time 12 seconds. Antinuclear antibody negative, serial LE preps negative. A bone marrow examination was normal, with adequate numbers and maturation of megakaryocytes.

The patient was placed on Prednisone (100 milligrams q.d.) for twelve days, during which time the platelet count varied irregularly from 5,000 per ml to 75,000 per ml, the lowest counts being on the 11th and 12th hospital days. During this period, several white counts and hemoglobin determinations showed no significant change. Liver and spleen scans were within normal limits.

A platelet survival study (Figure 1) was undertaken on the 9th hospital day. Two units of compatible platelet rich plasma in ACD-A solution was tagged according to the method of Aster. Serial counts were obtained from serum samples and from probes placed over the liver and over the spleen. (Fig. 2)

On the 12th hospital day the patient had an abdominal exploration and a splenectomy. The spleen was of normal size and showed only

From the Nuclear Medicine Service, Parkview Hospital, Nashville, Tennessee 37203.

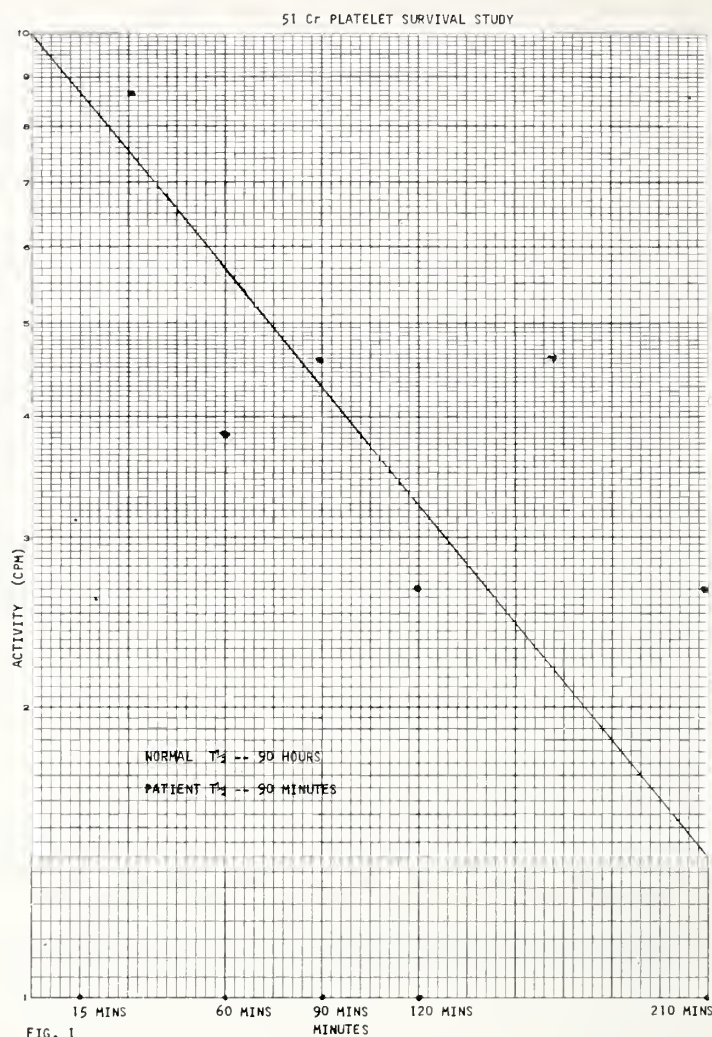


FIG. 1

LIVER/SPLEEN EXTERNAL COUNTS/MINUTE

Time	Liver	Spleen	Ratio
30 Mins	157	584	1 to 6.6
60 Mins	140	676	1 to 10.1
120 Mins	137	824	1 to 13.3

FIG. 2

chronic passive congestion. The platelet count rose steadily to 1.1 million over the next ten days, and then fell to 250,000 per ml., where it has stayed. The patient is now doing well six months after surgery and the platelet counts have remained in this same normal range.

While tagging of autologous platelets might result in less destruction of platelets by a patient, those patients whom we wish to study usually have such low platelet counts that tagging large numbers of platelets usually necessitates the use of homologous platelets. These are now easily



available in local blood banks. The ease with which the platelets may be tagged has been increased by the use of ACD solution with a relatively low pH (ACD-A solution). Although there is still only a 65% recovery of injected Chromium-51 labelled platelets in most patients, this is adequate for survival and sequestration studies and enables one to follow both plasma survival of platelets and sequestration of platelets in various body sites. Platelet survival studies show that a mean survival time of 9.9 days is normal with a half-life ( $T_{1/2}$ ) of approximately 90 hours. Our patient had a  $T_{1/2}$  of ninety minutes, a markedly shortened survival of platelets in the peripheral blood. Normal individuals accumulate almost twice as many counts over the spleen as over the liver. Our patient, who had a normal spleen size, accumulated 13 times as many counts over his spleen as over his liver. The combination of a low platelet count, adequate numbers of megakaryocytes in the bone marrow, lack of response to steroids, shortened platelet survival, and sequestration in the spleen, are indications for removal of the spleen. These criteria are valuable since many patients with thrombocytopenia

sequester more platelets in the liver than in the spleen, or may have relatively normal survival times. Such patients generally do not benefit from a splenectomy. Despite a variety of diseases which may lead to destruction of platelets (LE, ITP, drug sensitivity, etc.) the demonstration of shortened survival times and splenic sequestration of platelets may indicate that the patient will benefit from splenectomy. While our patient was older than the average patient with idiopathic thrombocytopenic purpura, the ability to control the diseases quickly and avoid long term steroid therapy was successfully achieved.

ROBERT L. BELL, M.D., *Director*

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\* \* \*

#### Informed Consent

The interpretation of informed consent is an issue which concerns the physician in a manner that is threatening to an increasing degree. The courts are ruling that the patient has the right of self-determination for non-emergency medical care. The January 1973 issue of *The Physician's Legal Brief* contains a provocative discussion by Don Harper Mills, M.D., J.D.,\* on this subject. The summary of this presentation deserves repeating.

These are the "do's" and "don'ts" on informed consent as presented by Dr. Mills:

##### DO'S

1. Disclose the identity of the proposed procedure.
2. Disclose the identity of the chief surgeon when he is other than the attending physician.
3. Disclose the risk of death or serious harm when applicable.
4. Disclose peculiar risks associated with a specific procedure.
5. Disclose risks to a greater extent when the proposed procedure is: (a) experimental, (b) new or novel, (c) ultrahazardous, (d) capable of altering sexual capacity or fertility,

and (e) purely cosmetic in purpose.

6. Disclose the intent to perform procedures incidental to the principal procedure.

##### DON'TS

1. Do not inform a patient that the proposed procedure is simple.
2. Do not inform a patient that no complication will occur.
3. Do not expect to obtain an informed consent by merely answering the patient's questions.
4. Do not expect nurses or paramedical personnel to make disclosures required for an informed consent.
5. Do not expect the consent to justify the lack of adequate indications for a procedure, unless the patient is so informed.

Specific, voluntary disclosure to patients may not be necessary when the risk(s) should already be known by lay persons of average sophistication; or the risk(s) are already known to the patient; or the patient specifically requests not to be informed of risks.—M.E.A.

\*Mills, Don Harper, Issue of informed consent looms as major problem for physicians, *The Physician's Legal Brief*, Vol. 5, No. 2, Jan. 1973. Schering Corp., Bloomfield, N. J.



## HISTORY

A 39-year-old executive entered the hospital emergency room for evaluation of severe chest pain of several hours duration. He had been entirely asymptomatic until approximately 2 weeks prior to admission at which time he had a "heavy" feeling in his mid chest while playing handball. This sensation disappeared fairly rapidly with cessation of this activity. The morning of admission while mowing the yard he again had onset of severe "heavy" chest discomfort. It was associated with a sensation of nausea and diaphoresis. The pain did not subside over the next few hours and he came to the emergency room for further evaluation. The family history is of interest in that the patient's father died at a relatively young age of a myocardial infarction. There has been no

history of diabetes, hypertension or hyperlipoproteinemia. The patient smoked approximately two packages of cigarettes daily. Physical examination disclosed a mesomorphic white man in moderate discomfort. There were no unusual findings on general physical examination. Examination of the cardiovascular system revealed the arterial pulses to be normal in contour and amplitude. There were no rubs or murmurs present. An  $S_4$  gallop was present at the apex. The following electrocardiogram was obtained. (Fig. 1)

Due to the rather severe pain the patient was hospitalized in the coronary care unit and observed closely over the next 24 hours. Over this period of time the pain gradually subsided with the occasional use of intramuscular Demerol. There were no arrhythmias. There was no notable change in cardiovascular examination. A second electrocardiogram was obtained. (Fig. 2). The patient remained afebrile and the white count was not elevated. The LDH rose to 550 mU/ml. The SGOT rose to 110 mU/ml. CPK rose at the end of the first 24 hours to 400 (upper limits of normal in this laboratory 65).

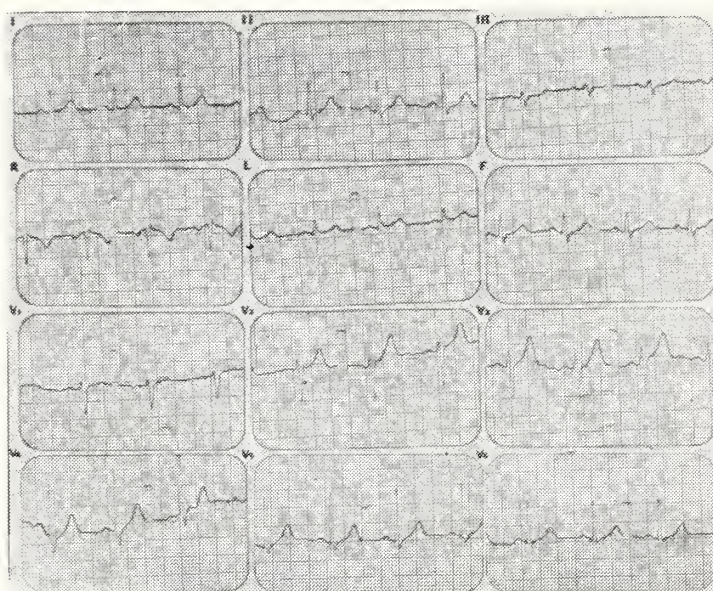


FIG. 1

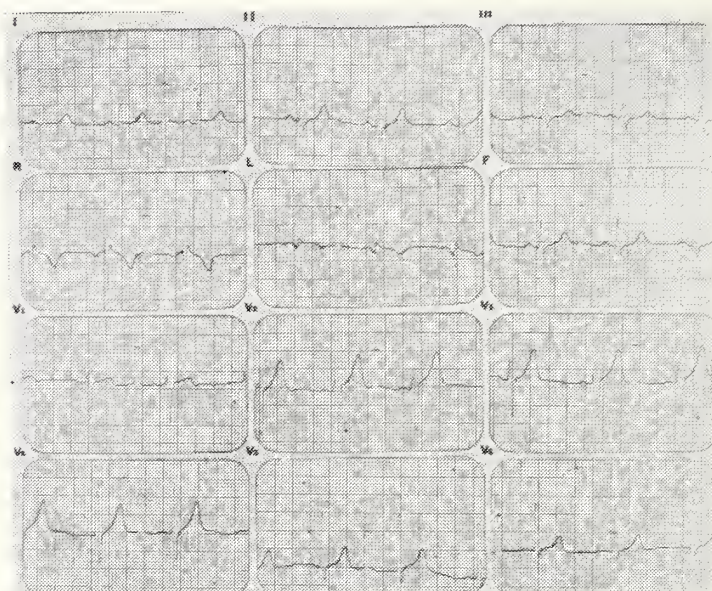


FIG. 2

## DISCUSSION

Electrocardiogram in Fig. 1 taken at the time of admission shows a regular sinus rhythm at a rate of 82/minute. PR interval is normal as is the P wave morphology. There is no notable abnormality of the QRS complexes or T waves and this tracing is felt to be within normal limits. The second electrocardiogram obtained 24 hours following admission shows the development of ST segment elevation as an isolated phenomenon in lead AVL with T wave inversion of this lead. In addition Q waves are now present in lead AVL. On the basis of these findings the diagnosis of evolving superior myocardial infarction was made. Although it is unusual to see electro-

cardiographic changes confined to an isolated lead the changes in lead AVL are pathognomonic of a superior wall infarction. It is of interest also, as is commonly observed, that the electrocardiogram at the time of presentation appeared to be entirely within normal limits. This patient's clinical course was uncomplicated and he was discharged after a two week stay in the hospital. He has at this point in time had no further chest pain. Due to the lack of further symptoms with progressive exercise at this point in time coronary cineangiography has not been carried out.

Final diagnosis: Evolving superior myocardial infarction.

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From the Department of Cardiology, St. Thomas Hospital, Nashville, Tenn., 37203.



**from the  
executive  
director**

**J. E. BALLENTINE**

# **MEDICAL DIGEST**

**NEWS OF INTEREST TO DOCTORS IN TENNESSEE**

## **HIGHLIGHTS OF JULY 7-8 TMA BOARD MEETING**

**THIRTY-THREE ITEMS OF BUSINESS ACTED UPON BY TMA BOARD . . .** The Trustees held the third quarter meeting in Knoxville on July 7-8, and acted upon thirty-three items of business. The Board made committee appointments and replacements to the Committee on Mental Health, the Liaison Committee to Medical Schools, Committee on Emergency Medical Services, Committee on Hospitals, Rural Health Committee, and submitted the names of Drs. Gordon Peerman, Nashville, Alvin J. Ingram, Memphis, and Paul McCammon, Knoxville, to the Governor for appointment of one to the State Health Facilities Commission recently created by the General Assembly.

\* \* \*

**TMA'S CONTINUING EDUCATION PROGRAM . . .** A major item determined was the funding of TMA's Continuing Medical Education program for 1974 . . . The program receives \$10,000 yearly from TMA, plus two grants from the Regional Medical Programs in Tennessee. The RMP funding ended on June 30 and will not be available for the future. This will require TMA to fully fund the program beginning in 1974. The Board adopted action that TMA should fund Continuing Medical Education in its current context for the calendar year 1974 in the amount of \$24,800.

\* \* \*

**MEDICAL STUDENT REPRESENTATION IN TMA HOUSE . . .** Adopted a motion that the Board of Trustees, in keeping with Resolution No. 17-13, rights of medical students, as adopted by the House of Delegates, to be implemented and the Board stated that it was desired to invite students to sit in as non-voting participants in the House of Delegates. The matter was referred to the Committee on Constitution and By-Laws to be worked out and presented to the House of Delegates in 1974.

\* \* \*

**TMA STAFF REORGANIZATION . . .** A reorganizational chart and defined staff responsibilities were presented to the Board as directed at the April meeting. The plan presented was for the long term and the type of staff organization that eventually the Association should have for conducting its work in future years. The Board adopted the plan and directed its implementation.

\* \* \*

**UPDATED PAYMENTS FOR MEDICAID . . .** The Board requested from the Department of Public Health that Medicaid payments to physicians be at least equal to those of Medicare. A letter from the Commissioner of Public Health dated August 9 was mailed to all physicians providing Medicaid services updating physicians' Medicaid payments to 100% of the



charge not to exceed the 75th percentile of the physicians' 1971 profiles . . . The program became effective August 15, 1973 for all Medicaid services rendered thereafter . . . The Medicaid payments will be brought to the level of payments being made in Medicare on August 15.

\* \* \*

**IMPORTANT PSRO MEETING IN ATLANTA SEPTEMBER 14-15** . . . The Board heard a report from the Executive Director concerning a two-day, six-state information meeting on PSRO sponsored by AMA, to be held in Atlanta on September 14-15. The Board took action that as many Board members as possible should attend this meeting, and approved funds to cover partial travel expenses of these Board members who attend.

\* \* \*

**PHYSICIAN'S ASSISTANTS** . . . The Board considered numerous letters received from ophthalmologists throughout the State opposing the Physician's Assistants bill that TMA sponsored in the General Assembly. There was lengthy debate on this matter. It was recommended that a committee of the Board be appointed to discuss the problem with representatives of the State Ophthalmology Society, and the discussion be limited to two major questions: (1) How does the present Physician's Assistant bill, now in the Calendar Committee of the State Senate, affect the ophthalmologist's practice of his profession, as he is now engaged? (2) How does the ophthalmologist see his utilization of a trained Physician's Assistant in terms of the specific procedures he will allow such an Assistant to perform for him? The Board appointed a committee of the Board, plus the Chairman of the special committee that prepared the Physician's Assistant bill, and directed that the committee meet with the Ophthalmology representatives to determine this issue.

\* \* \*

**OTHER ACTION** . . . The Board heard a report from the chairman of the Tennessee Delegation to the American Medical Association's House of Delegates, and recommended that AMA Delegates report regularly to the Board following the annual and clinical sessions of AMA . . . Heard a report from the TMA-Student Education Fund, and considered requests made by AMA for physician members to serve on AMA Councils and Committees.

Approved the third quarter TMA Financial Statement . . . Endorsed the 1973 version of the Medicredit bill sponsored by AMA . . . Took no action awaiting more information on a proposed pamphlet on PSRO for mailing to the membership . . . Approved the honorarium and travel expense of a speaker for the annual 1974 Medicine and Religion Breakfast.

\* \* \*

**PARTIAL GUIDELINES FOR PSRO** . . . Partial guidelines established by the Federal Government's Department of HEW for PSRO's are: (1) PSRO areas should not cross state lines, (2) In general, a PSRO area should not divide a county, (3) Existing boundaries of current local medical review organizations should be considered, (4) A PSRO area should, to the extent possible, coincide with a medical service area and assure broad, diverse representation of all medical specialities, (5) A PSRO area should generally include a minimum of approximately 300 licensed, practicing physicians, and (6) A designation of a PSRO area should take into account the need to allow effective coordination with Medicare-Medicaid fiscal agents.



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## **COMMUNICATIONS • LEGISLATION**

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**HEW CONDUCTS TENNESSEE PSRO MEETING . . .** The Atlanta Regional office of HEW held a meeting in Nashville, August 9, 1973, for the purpose of receiving recommendations for PSRO area designations in Tennessee. Dr. G. A. Reich of the Public Health Service presided over the meeting that was attended by approximately 75 physicians, government officials, other health care providers and interested persons. Dr. Kelley Avery of Union City presented the Tennessee Foundation for Medical Care's recommendations for area designations which are included in the Foundation's previously submitted proposal for a statewide coordinated PSRO. Dr. Avery indicated a desire on the part of Tennessee physicians to have the State divided into seven areas with the four metropolitan areas--Memphis, Nashville, Chattanooga and Knoxville--serving as individually operated PSROs plus three multi-county PSROs in the three grand divisions serving those who reside outside of the urban centers. The TFMC proposal was the only statewide suggestion made. Dr. John Dorian, president of the Memphis-Shelby County Medical Society spoke in favor of having Shelby County named as a separate PSRO area in whatever plan is ultimately adopted by HEW. Dr. Dorian indicated a desire on the part of Shelby County physicians to be an autonomous PSRO organization. Support for the TFMC proposal was received from the Commissioner of Public Health as well as others in attendance.

\* \* \*

**HEW REPORTS THAT PRIVATE CARE COSTS LESS . . .** The cost of medical care in private physicians' offices is materially less than it is in government-operated neighborhood health centers or in prepaid capitation group practice plans according to a recent HEW report. The study revealed that the cost of each patient visit to a private physician averaged \$9.50, compared with an average between \$18.07 and \$19.14 in capitation plans. The average cost in 18 well-established neighborhood health centers was \$21.16, or more than double the average cost in private physicians' offices, with centers supported by the Office of Economic Opportunity reflecting a cost of \$23.68. The study also found that the cost of physicians' services in private practice averaged almost exactly the same as it did in health centers. Overstaffing was the cause of inordinately higher costs in health centers. Non-physician payroll for each visit averaged \$1.13 for private MDs, compared with \$5.27 for health centers. Direct costs other than payroll were tagged at 31¢ for private physicians against whopping \$2.64 for the health centers. Overhead per visit averaged \$1.96 for private doctors, compared with \$7.08 for health centers. In addition, the HEW report



said that in computing M.D. costs per visit to a health center, a visit was defined as a "medical encounter" which may or may not involve a physician contact in a health center. In private practice, the report said, a visit "almost always includes such a contact".

\* \* \*

**JCAH PUBLISHES NEW SURVEY STANDARDS . . .** New survey eligibility criteria and other standards changes appear in the 1973 updating of the 1970 Accreditation Manual for Hospitals of the Joint Commission on Accreditation of Hospitals. The new standards may be obtained from the JCAH for \$3.50. Write Publications Coordinator, JCAH Headquarters, 875 N. Michigan Avenue, Chicago, Illinois 60611.

\* \* \*

**PHYSICIAN'S RECOGNITION AWARD RECIPIENTS GROW . . .** A total of 11,414 physicians have qualified for the 1972 AMA Physician's Recognition Award by completing 150 or more hours of continuing medical education over the three-year period ending June 30, 1972. Since the program began in 1969, 40,501 MDs have received certificates.

\* \* \*

**MEDICAL ASSISTANTS ELECT NEW OFFICERS . . .** The Tennessee Society of American Association of Medical Assistants have elected Martha P. Thomas of Memphis as President of the organization. Mary Lou Archer of Johnson City was named President-Elect. Other officers for 1973-74 include Patricia Bradley of Knoxville, vice-president; Sue McJunkin of Knoxville, secretary; and Geneva Hodges of Chattanooga, treasurer. The Association is composed of medical assistants, secretaries, nurses, technicians, bookkeepers or receptionists, employed by physicians and is designed to offer educational guidance in the various phases of their jobs in order to better serve the medical profession and the public.

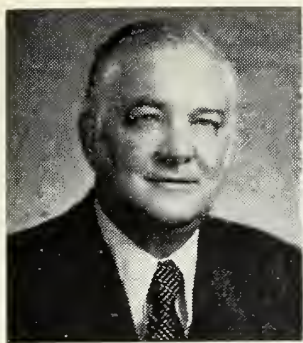
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**MEETING REPORTS AVAILABLE FROM AMA . . .** Individual audio-cassette reports from four recent AMA meetings are now available. The meetings are the 4th National Congress on Medical Ethics, the National Medical Legal Symposium, the 26th National Conference on Rural Health, and the 7th National Congress on the Socio-economics of Health Care. Each cassette is \$3 for AMA members and \$5 for others. The cassettes may be ordered by writing the American Medical Association, Department of Radio, TV & Motion Pictures, 535 North Dearborn Street, Chicago, Illinois 60610.

\* \* \*

**RECORDS SURVEY BEING CONDUCTED . . .** The AMA's Committee on Private Practice is surveying medical societies about the extent of the problem of photographing of medical records by insurance companies and their employees, investigative organizations, and other third parties. The questionnaire, being sent to county and metropolitan medical societies, states that while the practice is a convenient way to obtain information, it also "permits access to substantially greater amounts of information than is necessary or intended through the release authorized by the patient".





MORSE KOCHTITZKY

## President's page

### *Continuing Medical Education*

A significant milestone was passed recently when the TMA continuing medical education accreditation program was granted full approval for a period of four years by the AMA Council on Medical Education. This achievement, gained through the far-sighted and long-enduring efforts of the TMA Committee on Continuing Medical Education, places us in the select company of eleven other states with approved accreditation programs. It means that TMA is now the authorized accrediting agency for CME programs in the medical institutions/organizations of the state (except those which are national in scope, such as medical schools).

To date, five programs have been surveyed and approved: Bristol Memorial Hospital, Clarksville Memorial Hospital, Baroness Erlanger, Jackson-Madison County Hospital, and Knoxville Academy of Medicine. Other progressive institutions are working toward the development of viable CME programs and/or accreditation.

What constitutes a viable program? It is dependent upon effective leadership, careful planning, adequate facilities, and interested participation. It is based upon objectively identified needs; it is effected through an integrated educational plan designed to meet those needs; and it is evaluated in terms of performance. Its ultimate goal is better patient care. Its essence is quality, not size. It is therefore relevant to even the smallest community hospitals.

How can continuing medical education needs be identified? Simply asking physicians the question may not elicit objective answers, but answers that reflect specific interests (or even strengths) rather than real needs. Self-assessment tests? Perhaps, but this is only a halfway measure. Gaps in medical knowledge will surely preclude application of that missing knowledge, but knowledge alone is no guarantee of performance. What we need then is some measure of performance—some method of demonstrating continuing and improving competence.

The best approach at this time seems to be some type of medical audit (i.e., a review of medical care given, an appraisal of patient care, etc.) in order to compare it to previously adopted standards. If deficiencies are revealed, and there is usually some room for improvement, then educational plans can be realistically designed. It is generally conceded that meeting educational needs is easier than determining what those needs are. The overwhelming majority of educational needs can probably be met through local talent and resources. Of course, there may be those instances when an out-of-town "expert" will be required—but for a specific and objectively defined purpose which is directly related to patient care.

The concept of a continuum of medical education extending from entrance into medical school throughout a physician's career is generally accepted in our rapidly changing world. Continuing medical education is a day-to-day concern of the practicing physician who wants to provide better care for his patients. So why not pool our efforts at the local level and keep TMA in the vanguard of the CME parade?

Sincerely,

President



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SEPTEMBER, 1973

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## editorials

### ISCHEMIC HEART DISEASE

The increasing importance of coronary cineangiography and aortocoronary bypass in the diagnosis and treatment of ischemic heart disease cannot be over-estimated. Five to ten years must elapse before truly significant late results of this surgical procedure will become available. It would be desirable if carefully controlled groups followed over a number of years matched by age, sex, risk factors, functional classification, history of previous myocardial disease, etc., and managed medically or surgically could be studied. It would then be possible to determine whether medical or surgical management offered the patient with ischemic heart disease a better likelihood of preventing a subsequent myocardial infarction, improving the quality of life or prolonging life. Unfortunately no such study has been presented or is known to be contemplated. Previous re-

ports on the efficacy of medical management are not suitable for comparison with the results of bypass surgery, since the degree of lumen occlusion had not been substantiated by cineangiography in the medically managed group.

Reports are beginning to appear, however, which strongly suggest that many patients are benefited by these surgical procedures. Walker et al<sup>1</sup> have showed that clinical improvement following operation has been seen in 80 to 90 percent of patients. Total relief of angina pectoris has been effected in 50 to 60 percent. Morris et al<sup>2</sup> have recently reported that follow-up appraisals of patient activity showed that only 15 percent were not helped in this aspect, and most of these patients had been in functional class IV preoperatively. Hence, even these patients with no increase in activity may have been helped in respect to survival. Probably the most striking finding in his study of 480 patients was the upward change of functional classification of the patients in preoperative classes III and IV. With few exceptions the functional classification of these patients was converted to class I and II by coronary artery bypass. Both of these studies would suggest that the "quality of life" of patients is markedly improved by bypass surgery.

The two reports from the Cardiac Service at St. Thomas Hospital in this issue of the TENNESSEE MEDICAL JOURNAL are important contributions. Page and Campbell report on the decreasing risks of coronary cineangiography which has been achieved in that institution during the past six years. Although still lacking the safety of "non-invasive" techniques, complications have decreased from 11 percent to less than 2 percent and most have been minor in type. Since satisfactory cineangiography is necessary before the patient with ischemic heart disease can be evaluated and surgery considered, the decrease in complications from angiography has been essential. In the future further improvements in technique may reduce the number of complications even more.

Thomas et al also presents in this issue an excellent review of 200 consecutive patients who had bypass surgery, without a single death. For a procedure which was at one time thought to be hazardous, their record is truly remarkable. Most centers report an operative mortality of approximately 5 percent. As skills are acquired and techniques improved, the mortality in various centers will undoubtedly decrease. It is



interesting that Thomas reports that most of their patients had multiple blood vessels bypassed and only 19.5 percent had surgery for a single vessel. It is hoped that repair of multiple vessels will improve revascularization of the myocardium and give better long-term results. Simultaneous surgery on the myocardium or prosthetic valve replacement at the time of bypass surgery apparently did not increase mortality, a view not widely accepted by others in this field. Finally, in a review of their entire series of 773 patients the mortality was only 2.7 percent and there was no significant difference noted when age groups were compared.

That some patients may be unable to cope with psychological problems related to surgery of this type is discussed in a Staff Conference from the Department of Psychiatry at Vanderbilt University Medical Center.

Even the skeptic must become excited by these outstanding reports. The writer hopes that when he begins to have evidence of ischemic heart disease that the long-term results from aortocoronary surgery will be as impressive as the short-term results reported in this issue of the *TENNESSEE MEDICAL JOURNAL*.

A.B.S.

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#### MORE PSRO

It has been said that much of the information appearing in a medical text is obsolete before the book hits the market, and this is true even of some of the material in journals. In a fluid situation, only daily, or at the most weekly, publications can come anywhere near keeping the readership informed. It will be approximately five weeks before you will read this editorial, and PSRO things being as they are—fluid—there is just no telling what the situation will be by then. There are some things, however, which will not change, and these have to do with principle, and not details.

The first is that *we will have* PSRO's. I am a little tired of saying this, but apparently many of the doctors in the state are talking as if the problem will just go away. It will not. Only if the law is repealed will PSRO's go away, and the trend on the part of the legislators, who, in this case at least, reflect the attitude of the public, is for more restrictions, not less. If the doctors abrogate their legal responsibilities for setting up a workable system, others will do it—and make no mistake, they are anxious for the opportunity. While it is true that there is an escape mechanism, it involves having no patients where federal funds are involved—and this will doubtless spread to other third party payers.

The magic word is accountability, and really there can be no quarrel with that. We all want our tax dollars spent wisely. (Whether this is the way to do it is certainly debatable, but this is the way the Congress has decided it shall be.)

The second matter of principle is that your state medical association through your duly constituted representatives is working diligently to develop a workable plan, to be implemented, hopefully, through the Tennessee Foundation for Medical Care. You should give them your unswerving support, because they have a difficult, thankless, and maybe impossible task. I refer you to the View Box in this issue of the *JOURNAL* for the views of the editor of the *Rocky Mountain Medical Journal*, which are equally applicable here.

The third matter of principle is that regardless of what we physicians come up with, the Secretary of HEW is apparently going to do it his own way. This is both discouraging and stultifying. It enervates. Meetings of representatives of DHEW with the state societies from Illinois and Virginia, reported in the *AMA News*, indicated this was so, and a similar meeting held recently in Nashville did nothing to dispel this feeling. It leaves us physicians in a quandary as to how to proceed, but regardless of whether the DHEW is or is not acting in good faith, one thing is clear: *we will have* PSRO's.

Since all this is so, it seems we have no choice but to proceed to work for the best possible situation with the knowledge that we will have PSRO's, and the hope that they will be something we can live with.

J.B.T.





GILLIAND, HAROLD L., Brownsville, died July 28, 1973, age 61. Graduate of Vanderbilt University School of Medicine, 1940. Member of Consolidated Medical Assembly of West Tennessee.

## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### **BRADLEY COUNTY MEDICAL SOCIETY**

John Murphy, M.D., Cleveland

### **CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY**

Paul M. Burd, M.D., South Pittsburg  
Phil Douglas Craft, M.D., Chattanooga  
Daniel P. Labrador, Jr., M.D., Chattanooga

### **CUMBERLAND COUNTY MEDICAL SOCIETY**

Joel F. Johnson, Jr., M.D., Crossville  
Robert Wood, Jr., M.D., Crossville

### **GREENE COUNTY MEDICAL SOCIETY**

Dee L. Metcalf, M.D., Greeneville

### **HAWKINS COUNTY MEDICAL SOCIETY**

Marvin R. Beard, M.D., Surgoinsville  
William R. Kenny, M.D., Surgoinsville

### **KNOXVILLE ACADEMY OF MEDICINE**

John C. Rogers, Jr., M.D., Knoxville  
Carlos L. Velado, M.D., Knoxville

### **WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION**

Boyce Berry, M.D., Johnson City  
Richard B. Heintz, M.D., Johnson City

## programs and news of medical societies

### **Nashville Academy of Medicine**

An AMA survey was conducted July 26-29 at the request of the Academy staff with the approval of the Board of Directors. The survey team will report its findings at a future meeting of the Board of Directors.

The Board of Directors met on July 26 and approved a request of the Medicine and Religion Committee for Academy sponsorship of a postgraduate seminar on "Medicine and Religion" in October and endorsed a "Cooperative Agreement on Emergency Medical Services" and a "Proposal for Medical Communications Center" submitted by the Disaster and Emergencies Committee.

## national news

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

In an effort to reach some hard conclusions in the fuzzy area of the impact of various kinds of health insurance on health care, the federal government is starting a \$30 million experiment.

Some of the questions that researchers hope to answer are:

—Would erasure of all financial barriers cause a surge of demand?

—Do deductibles and co-insurance exert a brake on frivolous or excessive use of physicians and hospitals?

—Do families alter their patterns of physician-hospital utilization depending upon their type of insurance? How is their health affected?

The study, handled by the Office of Economic Opportunity (OEO) in conjunction with the Health, Education, and Welfare Department, will cover 2,000 families containing about 7,500 people. It will last up to five years. About 100 families in Dayton, Ohio, will be enlisted shortly. Four other cities eventually will take part. The participants' identities are confidential.

The HEW Department is slated to take over the project next year. Noting the proposals before Congress for national health insurance (NHI) programs, the OEO says "The federal government will inevitably play a major role in determining the way in which the nation's health insurance plans operate. Unfortunately, current knowledge of health economics is not sufficient to predict the effects of public policies related to health insurance."

Those in the experiment will have to give up existing health insurance policies. New ones will be provided free as far as policy cost is concerned. The coverage will take three basic forms:

(1) No deductible; no co-insurance. Basi-



cally unlimited free medical care.

(2) \$100 yearly per-person deductible, no co-insurance.

(3) No deductible, 20 percent co-insurance.

There will be variations on these plans. But all will have a catastrophic provision above a certain amount of out-of-pocket costs determined by some fraction of the yearly family income.

Officials concede that Congress may enact a NHI bill before much meaningful data are accumulated from the experiment. Nevertheless, they say, the information will be valuable and could lead to adjustments in any existing national program.

Benefits will vary in the experimental plans. One will cover all visits to physicians' offices while the patients share hospital costs. Psychiatric care will be limited to 50 outpatient visits annually. Dental care will be confined to children and exclude orthodontic work.

Families of all income levels will be included, up to \$25,000 a year. All participants will be interviewed in depth; about one-third will receive physical examinations.

The experiment is being conducted under a grant to the Rand Corporation, Santa Monica, California, a subcontract for operational work is held by Mathematica, Inc., of Princeton, New Jersey.

No one will be surprised if some commonly-held notions aren't exploded when the project is finished. A little-publicized HEW study, for example, indicates that average cost per medical visit are much cheaper with the private practitioner than at a neighborhood health center or a pre-paid group practice. The estimated private costs ranged from \$6.58 to \$10.63 by specialties. In contrast the cost per visit at 18 well-established neighborhood health centers was \$21.16. The pre-paid group rate was figured at more than \$18.

The report, prepared by the office of the Assistant HEW Secretary for Planning and Evaluation, said that strict comparisons among the three modes of delivery are difficult and subject to interpretation. Yet "the order of magnitude difference was far greater than had been anticipated."

Taking into account all variables, the report said "When related to the estimated private practice average cost per visit the (neighbor-

hood) center physician encounter cost appears to be extreme in nature."

On the surface, though the study group took pains not to put it so bluntly, the report indicated that larger delivery systems might not be as efficient and economical as the solo practitioner.

The report concluded:

"Like any analysis, this study raised questions which others must examine and answer. Unfortunately, the luxury of time to answer these questions is not available. As we move through a period of rapid social and health policy change the need for these answers becomes almost immediate."

\* \* \*

The Administration hopes to come up with a new national health insurance plan by late September. HEW Secretary Casper Weinberger said consideration centers around two approaches:

—A combination of employer-mandated coverage plus federally financed catastrophic protection, or

—A national plan modeled after the Federal Employees Health Benefits Program.

The two options listed by Weinberger aren't mutually exclusive. How the Federal Employees Program (FEP) could be translated into a national plan was not explained. Government workers under FEP can choose among high and low indemnity or service plans of private insurers and the Blues with the federal government paying a set share. Pre-paid group practice is another choice. Presumably, a national plan would have the private employers financing the share paid by Uncle Sam for U. S. workers.

The first mentioned plans sounds like the previous Administration proposal with the exception of a strong catastrophic plank plus universal coverage, not provided before.

Whatever scheme is picked, Weinberger said, it will include a partnership concept involving private insurance and public agencies that will (1) assure that all have access to basic comprehensive coverage regardless of lack of sufficient income; (2) will make judicious use of co-insurance and deductibles; and (3) will contain features "to halt or at least sharply reduce medical cost inflation."

\* \* \*

Leonard Woodcock, President of the United Auto Workers, has called upon the Adminis-



tration to roll back health insurance premiums under Phase IV of the Economic Stabilization Program. The labor leader who is chairman of the Committee for National Health Insurance (CNHI) said the commercial health insurance industry "has reaped a huge windfall" under Phase II and Phase III regulations.

Woodcock said the six largest health insurance companies had "increased their net gain from group health operations to \$140.1 million last year from \$31.9 million in 1971 . . . A 350 percent increase."

He appeared at a Washington news conference with Luci Johnson Nugent, daughter of the late President Lyndon Johnson, and leading members of CNHI. Mrs. Nugent announced her support of the Kennedy-Griffiths health security bill backed by organized labor and the CNHI.

A spokesman for the Health Insurance Institute, representing the insurance industry, denied Woodcock's charges and said the industry experienced a profit of only 1.5 percent on premiums during 1972 based on an analysis of 20 companies.

"Because they were not windfall profits on a general, across-the-board basis, there would seem to be little need to roll back health insurance," the spokesman said.

\* \* \*

Alexander MacKay Schmidt, M.D., has been named Commissioner of the Food and Drug Administration.

Dr. Schmidt, 43, succeeds Charles C. Edwards, M.D., who is now Assistant Secretary for Health of HEW.

From 1970 until earlier this year, Dr. Schmidt was Dean and Professor of Medicine at the Abraham Lincoln School of Medicine, University of Illinois College of Medicine.

Dr. Schmidt previously served in HEW as chief of the continuing education and training branch, Regional Medical Program, from August 1967 until December 1968. From there he went to the University of Illinois College of Medicine as Executive Associate Dean and Associate Professor of Medicine, before being named Dean and Professor of Medicine.

Dr. Schmidt received the Bachelor of Science degree from Northwestern University in 1951 and his M.D. degree from the University of Utah College of Medicine in 1955. From 1960 to 1967 he held various academic positions

at the University of Utah College of Medicine.

\* \* \*

The prestigious Brookings Institution has come out with another provocative overview of U. S. Government policies that declares socialism in the European vein "has negligible support in the United States."

". . . there appears to be little support for direct provision by the federal government of public services, especially such human services as education, health care, and law enforcement," the report says.

The Brookings report "Setting National Priorities—the 1974 Budget" last year proved a landmark "think piece" that helped set the tone for the Nixon Administration's domestic policy programs in 1974. That report urged "social experiments" by the government before embarking on major new national programs. Many believe the private foundation's report was a major factor in the Administration's decision to slash the scope of its Health Maintenance Organization (HMO) program to a strictly experimental project.

In the latest report's discussion of national health insurance (NHI), the concept of relating benefits to income is endorsed. This is a prime feature of the American Medical Association's Mediredit proposal.

The Brookings report said:

"The type of proposal that seems best adapted to meeting all three criteria of equity, protection and efficiency is a national health insurance plan with income-related benefits. Under such a plan, both deductibles and co-insurance would be related to income so that people would be protected against expenses that were high relative to their income. To prevent undue financial burdens, a ceiling related to income could be placed on the out-of-pocket expenses a family would have to pay. One advantage of such an approach is that a single plan would serve the dual purpose of protecting the poor against normal expenses and protecting higher income people against heavy expenses; hence no stigma would be attached to receiving benefits under the plan."

The Senate Finance Committee has voted a substantial liberalization of the Keogh plan for self-employed people, including physicians, but also added restrictions on retirement savings by professional corporations.

Committee Chairman Russell Long (D., La.) said the reason for the restrictions was the fact



that in some cases professional men who had incorporated and who had high incomes could set aside on a deferred taxation basis as much as \$32,500 yearly while the self-employed were limited to a maximum of \$2,500.

Under the new Keogh plan limits set by the Committee, which are expected to win Senate approval, physicians, lawyers and dentists and other self-employed are allowed a deductible contribution to a retirement plan of up to 15 percent of earned income with a maximum of \$7,500 annually. There would be a \$100,000 limit on earned income that can be taken into account. (Present law limits retirement set-aside subject to tax deduction to 10 percent of earned income but not more than \$2,500.)

According to the Committee, the \$100,000 limit means that "higher income self-employed, desiring to achieve the \$7,500 maximum contribution for themselves, will find it necessary to contribute on behalf of their employees at a 7.5 percent or greater rate."

The same self-employed plan limitations were imposed on retirement contributions on behalf of certain owner-managers of corporations. These owner-managers subject to the limitations would be those having more than a two percent ownership interest in the stock of a corporation but only of all such persons in a particular corporation in the aggregate have more than a 25 percent interest in the contributions or benefits of the pension plan.

An increasing number of physicians in recent years have formed professional corporations in order, among other reasons, to be able to invest more in retirement savings plans with tax deferrals than possible under the self-employed Keogh plan.

The new plan, believed to have the endorsement of the Administration, stands a good chance of Congressional approval.

\* \* \*

Congress has been asked to approve practical, realistic programs for reimbursing effective home health care agencies and programs.

The American Medical Association told the Senate Aging Subcommittee the range of home services covered by government programs needs re-examination.

"Physicians . . . who want the best possible care for their patients must be allowed to order and to provide preventive, supportive, and rehabilitative services at home as they presently do at other sites," testified Charles Weller, M.D.,

a member of the AMA's community health care.

Dr. Weller noted that home care agencies have been protesting the Social Security Administration's policies on the home health provisions of Medicare in as much as less than one percent of Medicare dollars go for this type of health care.

As evidence of the AMA's strong support of the concept, Dr. Weller pointed to the important home health services component in the AMA's Mediscredit national health proposal.

"Effective programs of home care services can reduce costly inpatient stays and achieve significant savings," Dr. Weller said.

"In summary, the AMA actively supports the development and expansion of sound home care programs. We will continue to urge that they be covered under both private and public programs. We believe they can aid selected patients, reduce costs, reduce institutionalization, and provide valuable assistance to physicians whose patients participate in them. More education is needed about the benefits of home care programs, and physicians will continue their efforts in this field."

## medical news in tennessee

### Red Boiling Springs Clinic Staff Consists of Four Physicians

In one year the Red Boiling Springs Area Medical Council, Inc. has accomplished the purposes for which the organization was formed, namely, to equip a medical clinic, secure medical doctors and a drug store for the area.

June 18, 1973 marked the date for signing the agreement between the Red Boiling Springs Area Medical Council, Inc. represented by B. M. Rains, Jr. council president and Aristides Cardona, M.D. and Johnny Brown, Administrator of Clay County Hospital and out-patient clinic. They will manage and operate the clinic in Red Boiling Springs effective September 1, 1973.

Miss Carolyn Whitaker, Family Nurse Clinician, has not been employed by the Red Boiling Springs Area Medical Council, Inc. since August 31, 1973.

### University of Tennessee Medical Units Medical Information Unit Open 24 Hours

A 24-hour biomedical and scientific rapid



access information system is now in operation at the UT Medical Units Library in Memphis, providing physicians and other professionals with reference services, photocopy of journal articles, and preparation of bibliographies.

Miss Sara Jean Jackson, director of the program, and three staff members, will coordinate the handling of some 80,000 volumes and 2,000 journal subscriptions in the library.

An additional service accompanying the system is a computer hook-up with the National Library of Medicine in Bethesda, Md., called MEDLINE, which includes references to 1,050 "Index Medicus" journals and over 2,300 biomedical journals.

### **Health Education Program Launched**

The University of Tennessee College of Medicine is launching a new health education program for the general public this month.

T. Albert Farmer, M.D., dean of the college at Memphis, said that Tennessee newspapers are being asked to publish a weekly health information column which will emanate from the college.

Immediately responsible for the program is E. William Rosenberg, M.D., associate dean for postgraduate and public education in the College of Medicine.

"The University is responding to the frequent observation by physicians that much of the health care crisis would be resolved if people would take better care of themselves. In essence, it is a program in preventive medicine," observed Dean Farmer.

Dr. Rosenberg said that the information will seek to make the general public more aware of how they can better guard their health and why certain practices are important. An example would be providing information about cholesterol and other facets of diet and risk factors such as hypertension and obesity.

"We've tried telling people, 'do this, don't do that.' Now we're going to try telling them why, with the hope that this will have a greater impact. People must still rely on their physicians. But we must begin to do a better job of educating toward a patient-physician partnership for health," said Dr. Rosenberg.

The information will be gathered and written by Mrs. Betty Kirk, assistant for public education, in consultation with various faculty of the College of Medicine. It will be released in cooperation with University of Tennessee

news services in Memphis and Knoxville.

Members of the TMA who would like to receive advance copies of the first group of columns in the series may write to Mrs. Kirk at 725 Pathology Building, The University of Tennessee Medical Units, 800 Madison Avenue, Memphis 38103.

### **Meharry Medical College**

Meharry Medical College has initiated a series of self-instructional packages based on videotape cassettes for improving methods of instruction in behavioral aspects of health and illness, Dr. Ralph J. Cazort, Dean, School of Medicine, announced. Medical students, physicians, and behavioral sciences faculty, and a specially recruited support and evaluation team will create about 50 packages. These will be used in addition to traditional teaching methods.

Behavioral scientists and physicians will collaborate on the production. This cooperation, already in operation at Meharry, will be strengthened and increased during the project. A large and diversified behavioral science faculty takes an active part in medical education, Dr. Cazort said.

The learning packages will be developed around three different themes. One will be the doctor-patient relationship for instruction about physical diagnosis and patient interview. The second will be the health ecology model in which selected diseases will be viewed for the variety of relationships involving bio/psycho/social and environmental factors in prevention, cause and treatment of illness. The individual life cycle and the family life cycle will be considered in the third set of packages, which will emphasize normal, positive, and healthy aspects of the behavior of members of minority groups.

Dr. Cazort said the self-instructional packages, built around the video-cassettes, will make it possible for the medical students to learn in a sequence more in keeping with their individual motivations and interests, at their own pace, from materials designed to meet their learning needs.

What is perhaps more important, he noted, is that the project will establish a base for scientific comparisons of the educational merits of video-enhanced self-instructional models compared with more traditional methods of instruction such as lectures, reading and presentation of clinical cases. Appropriate tapes will be



available for distribution outside Meharry.

Dr. Cazort announced that the grant is from the Fund for the Improvement of Post-Secondary Education, a new agency within the Department of Health, Education and Welfare. Meharry's grant is the only one approved in Tennessee, and the only one in the nation going to a medical school.

## personal news

DR. DONALD B. GIBSON, Athens, has been elected to active membership in the American Academy of Family Physicians.

DR. R. L. GILLIAM, Union City, has announced his retirement from practice. Dr. Gilliam has been associated with the Union City Clinic since its founding in 1952.

DR. B. DAN HOLT, Greeneville, has been appointed to the position of radiologist for Jesse Holman Jones Hospital.

DR. TRUETT H. PIERCE, Sneedville, has been elected mayor of the City of Sneedville. Dr. Pierce is also a member of the local school board.

DR. MATTHEW WALKER, Nashville, has been promoted to the position of provost for external affairs at Meharry Medical College.

DR. THAYER S. WILSON, Carthage, was recently honored by the Smith County Quarterly Court for his more than 40 years dedicated service as County Medical Examiner.

DR. HARRY WAGGONER, Johnson City, has been reappointed to the Commission on Aging for a six-year term by Governor Dunn.

## book reviews

**Medicine for the Paramedical Professions**, Douglas W. Piper, M.D., Editor, McGraw-Hill Book Company of Australia, Sydney, 1970. 321 pages plus index. \$7.95 (Australian). Accompanying workbook \$2.95.

This book is written primarily for paramedical personnel, specifically nurses, technicians, social workers, physiotherapists, dieticians, etc., and would be a handy book to keep around the office of any practicing physician for quick reference by his office personnel. After an introductory chapter which defines medical terms, the contents are arranged by major systems. In each system there is a brief review of anatomy and physiology, although some knowledge of these is assumed by the authors. There is a workbook which goes with this, for those who are using it as a formal training tool. A statement by Dr. Piper in his preface should be borne in mind, to the effect that "knowledge gained

by reading unrelated to practical experience tends to be poorly retained."

**Functional Aids for the Multiple Handicapped**, Isabel P. Robinault, Ph.D., Harper and Rowe, Hagerstown, Maryland, 1973. 224 pages plus index. \$10.00.

This is a fascinating book, and is a compendium of human ingenuity as it applies to handicapped individuals. There are things in here which would be of interest to anyone, but would be particularly valuable to anyone who has anything at all to do with handicapped people. This applies not only to physicians and social workers but to parents as well. Its philosophy and content is well expressed in the dedication, which says "To the challengers and the challenged, whose initiative is recorded in this book."

**Surgery in World War II: Orthopedic Surgery in the Zone of the Interior**, Mather Cleveland, M.D., and Alfred R. Shands, Jr., M.D., Editors, Office of the Surgeon General, Department of the Army, Washington, D.C., 1970. 1,017 pages plus index. \$12.25.

This final volume in the orthopedic subseries of the history of the U.S. Army Medical Department in World War II described the treatment within the U.S. of orthopedic casualties from all theaters of war. The first part of the volume has to do with administration and the second part with early military problems as regards diseases present prior to induction, training injuries and so forth. A discussion of problems in returned casualties there are chapters on fracture management, which then is regionalized as to upper and lower extremities, spine, and lower back. Amputations are discussed, and there is extensive discussion of training of amputees and prostheses. This volume is historically valuable and shows the revolution of orthopedics in one of its periods of greatest development.

**Macrophages and Cellular Immunity**, Allen I. Laskin, Ph.D., and Hubert Lechevalier, Ph.D., Editors. Chemical Rubber Company Press, Cleveland, Ohio, 1972. 121 pages. \$16.00.

This book is one of the CRC monographs series, which by their very nature are of limited scope, but deal with timely significant work done to fulfill a recognized need of the scientific community. This is an important work, which would be of interest to anyone interested in immunity, and it makes interesting reading. It is an exhaustive work, and very extensively referenced. The authors are all pre-eminent in the various aspects of microbiology, bacteriology and immunology.

The following volumes of the very excellent *Lang Medical Publications* paperback series have been received, and as always are very highly recommended. They are published by Lang Medical Publications, Los Altos, California.

**Handbook of Pediatrics**, 10th ed. Henry K. Sliver, C. Henry Kempe, Henry C. Bruyn, 666 pages plus index. \$6.50.

**Current Diagnosis and Therapy**, 1973 Edition, by Marchus A. Crupp, M.D. and Milton A. Chatton, M.D. 962 pages plus index. \$12.00.



**Principles of Clinical Electrocardiography (Goldman)**, 8th Ed., Mervin J. Goldman, 1973. 394 pages plus index. \$8.00.

**Review of Medical Physiology**, William F. Ganong, M.D., 6th Ed., 1973. 545 pages plus index. \$9.00.

**Review of Physiological Chemistry**, Harold A. Harper, Ph.D., 14th Ed. 1973. 504 pages plus appendix (Gen. & Phys. Chem., Organic Chem. Review. 20 pages plus index). \$8.50.

## BRIEFLY NOTED

**Lithium in Medicine**, Joseph Mendels and Stephen K. Secunda, Editors. Gordon and Bleach Science Publishers, New York, 1972. 211 pages plus index. \$12.50.

**Manual of Clinical Laboratory Procedures for Non-Routine Problems**, by Seymour Winsten, Ph.D. and Fram R. Dalal, Ph.D. Chemical Rubber Company Press, Cleveland, Ohio, 1972. 151 pages. \$15.30.

**Newer Anti-Cancer Drugs and Procedures**, M. Furio-entino, Editor. Proceedings of a Clinical Oncology Seminar, Padua, Italy, September, 1971. Piccin Medical Books, Padua, 1971.

**Thyroid Tumors, Lymphomas and Granulocytic Leukemia**, M. Furio-entino, R. Vangelista, and E. Grigoletto, Editors. Proceedings of the Second Pauda Seminar on Clinical Oncology, October, 1972, Piccin Medical Books, Padua, 1972.

*The following books are written primarily for patients. All give excellent coverage of their subjects, and should prove to be of interest to those involved. They are also generally sound enough medically to be of interest to any physician, particularly the family practitioner, who might be interested in these topics.*

**The Low Blood Sugar Cookbook** (A Practical Comprehensive Cookbook For People Who Suffer From Hypoglycemia), Margo Blevin and Geri Ginder, Doubleday and Company, New York, June, 1973. 511 pages plus index.

This book answers the question "If you can't eat sugar, potatoes, rice, bread, wheat, corn, some fruits and most prepared foods, what can you eat?" The answer is apparently a great deal, because there are literally hundreds of tempting recipes in this book for the necessary high protein, low carbohydrate diet. This should be a boon to anyone with hypoglycemia.

**Is My Baby All Right?** by Virginia Apgar, M.D., and Joan Beck. Trident Press, a Division of Simon and Schuster, New York, January, 1973. 473 pages plus index. \$9.95.

This book discusses how life begins and what part heredity plays in birth defects, following which there are chapters on the most common birth defects, concluding with a chapter outlining ways in which couples can predict the outcome of the pregnancy and help assure the birth of a normal child. It is written in a clear understandable style with warmth and understanding. It is recommended for any physician interested in the subject, as well as for patients, for whom it was primarily written. It would be ideal not only for parents of handicapped children, but for all prospective parents.

**Handy Home Medical Advisor and Concise Medical Encyclopedia** (revised edition), Morris Fishbein, M.D., Doubleday and Company, New York, May, 1973. \$5.95.

**Your Prostate, What It Is, What It Does, and the Diseases That Affect It**, by Robert L. Rowan, M.D. and Paul Gillette, Ph.D., Doubleday and Company, New York, April, 1973. \$5.95.

**Headaches: The Kinds and Cures**, Arthur S. Freese, D.D.S., Doubleday and Company, New York, April, 1973. \$6.95.

**Vasectomy, Sex, and Parenthood**, by Norman Fleishman and Peter L. Dixon, Doubleday and Company, New York, March, 1973. \$5.95.

**The Expectant Father: A Practical Guide**, George Schaefer, M.D., Everyday Handbooks of Barnes and Noble, a Division of Harper and Rowe, New York, 1972. Paper \$1.95.

This little book is a paperback update of a volume previously published in 1964 by Simon and Schuster. It is a valuable book which sets forth for the father his role in procreation, his support of his wife during pregnancy, and his relationship to his new family in subsequent weeks and months. There is a chapter on family planning, and appendices containing lists of boy's and girl's names, a glossary of doctors' terms, and a list of books to read.

**The Carbo-Calorie Diet**, by Donald S. Mart, Dolphin Books, A Division of Doubleday and Company, New York, May, 1973. Paper 95¢.

This little book is one of a rash of books on diets, reasonable and far out, which have hit the market lately. This one has the advantage of being both sensible and practical and is based primarily on limitation of carbohydrate calories. Most of the book is a list of food and the carbo-calories they contain, and there is a formula to help you eat less than 100 but no less than 58 carbo-calories a day. You are advised to carry this book with you wherever you go and refer to it until you know the important carbo-calorie counts automatically, being admonished that one little mistake can wipe out your whole diet day. You are also advised that if you are a compulsive overeater to forget this diet and have your compulsions resolved first. The diet is recommended by Robert J. Heller, M.D., an internist and endocrinologist, as being innovative and logical and one which he says should work.

## announcements

### CALENDAR OF MEETINGS

#### STATE

- |             |   |
|-------------|---|
| Sept. 25-26 | Governor's Conference on Aging, Nashville Municipal Auditorium, Nashville.                    |
| Oct. 1-2    | Tennessee Valley Medical Assembly, Read House, Chattanooga                                    |
| Oct. 13     | Memphis Dermatological Society Annual Meeting, University of Tennessee Medical Units, Memphis |



Oct. 31- Southeastern Chapter—The Society of  
Nov. 3 Nuclear Medicine, 14th Annual Meet-  
ing, Holiday Inn-Rivermont, Memphis

### NATIONAL

Sept. 20-23 American Society of Internal Medicine,  
Interim Meeting, Marriott Hotel, Dallas  
Oct. 1-14 American Academy of Family Phy-  
sicians, Denver  
Oct. 7-11 American Society of Anesthesiologists,  
San Francisco Hilton, San Francisco  
Oct. 10-12 Columbia University College of Phy-  
sicians and Surgeons, "Medical Aspects  
of Drug Abuse," New York, New  
York  
Oct. 11-13 12th Annual Cardiovascular Sympo-  
sium, Williamsburg Colony Inn, Wil-  
liamsburg, Va.  
Oct. 14-18 University of Colorado School of  
Medicine, Pathology in Gynecology and  
Obstetrics, Aspen, Colorado  
Oct. 15-19 American College of Surgeons, Clin-  
ical Congress, Conrad Hilton, Chicago  
Oct. 18-21 American Academy of Child Psychia-  
try, Shoreham Hotel, Washington, D.C.

Oct. 19-26 College of American Pathologists, Con-  
rad Hilton Hotel, Chicago  
Oct. 19-26 American Society of Clinical Pathol-  
ogists, Palmer House, Chicago  
Oct. 20-25 American Academy of Pediatrics, Pal-  
mer House, Chicago  
Oct. 21-26 American Academy of Physical Med-  
icine and Rehabilitation, Sheraton Park  
Hotel, Washington, D.C.  
Oct. 21-26 American Society of Plastic and Recon-  
structive Surgeons, Diplomat Hotel,  
Hollywood, Fla.  
Oct. 23-25 American College of Emergency Phy-  
sicians, Fairmont Hotel, Dallas  
Oct. 25-27 American College of Gastroenterology,  
Postgraduate course in Gastroenter-  
ology, Los Angeles, Calif.  
Nov. 4-7 American Urological Association, 71st  
Annual Meeting, Cerromar Beach  
Hotel, Dorado Beach, P.R.  
Nov. 11-16 American Association of Blood Banks,  
Americana Hotel, Bal Harbour, Fla.  
Nov. 14-17 American Academy of Neurological  
Surgery, Huntington Hotel, Pasadena,  
Calif.

\* \* \*

## Heat Illness

Heat illness is an excessive rise in body temperature. Loss of body fluid through sweat-  
ing and failure to replace water through drink-  
ing adequate amounts makes it difficult for the  
body to dissipate heat. The two forms of serious  
heat illnesses are heat exhaustion and heat  
stroke. Most persons can learn to recognize the  
progressive signs of heat illness. They are pro-  
fuse sweating, fatigue, and perhaps muscle  
cramps, and then heat exhaustion with its rapid  
pulse. Heat exhaustion can progress to heat  
stroke, the main sign being the cessation of  
sweating.

The most important considerations in avoid-  
ing serious heat illness are:

- Acclimate gradually to the heat with  
physical conditioning in the early morn-  
ing or evening hours.
- Later on participate for brief periods in  
your sport or recreational activity during  
the hot part of the day to further accli-  
mate the body.
- Avoid restrictive clothing, rubberized or

non-porous material that does not permit  
heat dissipation.

- Remember that if you lose excessive  
amounts of weight in a before/after com-  
parison (5 or more pounds, which is  
mainly water loss) you are more suscepti-  
ble to heat illness than an individual with  
a less drastic weight loss.
- Realize that high temperatures, high rela-  
tive humidity, or a combination of these  
increase the risk of heat illness.

The American Medical Association's Com-  
mittee on Medical Aspects of Sports reminds  
that the most important general principle to keep  
in mind is that if the body receives adequate  
water, the possibility of heat illness is very un-  
likely. Frequent rest breaks to replenish the  
water lost through sweating should be a regular  
part of your summer recreation or sports pro-  
gram.

The most basic first aid tip in caring for heat  
illness (heat exhaustion or heat stroke) is to cool  
the person by the most expedient means, while  
having someone else summon an ambulance.





## continuing education opportunities

*The continuing medical education accreditation program of TMA, after receiving provisional approval for one year, has as of June 22 been granted full approval for a period of 4 years by AMA's Council on Medical Education. If the continuing medical education program of your hospital or medical society is accredited by TMA's committee, you may receive for your attendance at its functions Category 1 credit for the AMA Physician's Recognition Award. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee 37203.*

### Meharry Medical College CME Course

The following continuing education course is being offered by the Meharry Medical College during 1973:

November 3     Radiation Technology, Learning Resources Center

### Vanderbilt University CME Courses

Date	Title, Location, Program Coordinator
Sept. 19-21	Endocrinology (American College of Physicians) Underwood Auditorium, Vanderbilt, Grant W. Liddle, M.D.
Sept. 26-28	The Injured Child (American Academy of Orthopedic Surgeons) Underwood Auditorium, Vanderbilt, John Connolly, M.D.
Oct. 10-12	Hypertension (American College of Cardiology) Underwood Auditorium, Vanderbilt, Lawrence Grossman, M.D.
Oct. 25-27	Child Neurology, Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

### Fourth Annual Autumn Pediatric Symposium

The Fourth Annual Autumn Pediatric Symposium at Vanderbilt University will be held October 27, 1973 with the topic being Pediatric Endocrinology—DIAGNOSIS AND MANAGEMENT OF COMMON PROBLEMS.

Guest faculty will include Dr. Melvin Grumbach, Chairman of the Department of Pediatrics, University of California at San Francisco, and Dr. Robert Stempfel, Chairman of the Department of Pediatrics, University of California at Davis.

For information write Ian M. Burr, M.D., Depart-

ment of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tennessee 37232.

### The 1st Invitational Symposium On the Sero-Diagnosis of Cancer

The 1st Invitational Symposium on the Sero-Diagnosis of Cancer co-sponsored by the Laboratory Service, Naval Hospital, Bethesda, the College of American Pathologists (CAP), the American Society of Clinical Pathologists (ASCP), and the Armed Forces Radiobiology Research Institute (AFRRI), will be held Saturday 29 September 1973, in the Naval Hospital Auditorium, National Naval Medical Center, Bethesda, Maryland 20014.

Wet workshops in methodology under the auspices of the ASCP will be offered the day preceding or following the symposium. The Symposium papers will be divided into three major categories: Enzymes in the Sero-Diagnosis of Cancer, Unique Antigenic Systems in the Sero-Diagnosis of Cancer, Glyco-Protein Correlations in the Sero-Diagnosis of Cancer.

A registration fee of \$40 will include attendance at the symposium, parking, noontime luncheon and a copy of the proceedings. Advanced registration is required.

For further information, including a copy of the complete program, information on nearby hotels and workshops, write: Symposium, College of American Pathologists, 1775 K Street, N.W., Washington, D.C. 20006; Telephone: (202) 466-2121.

### Symposium on Gynecological Malignancy

The 1973 Walter L. Thomas Symposium on Gynecological Malignancy and Surgery will be held at Duke University Medical Center, Durham, North Carolina on September 21 and 22, 1973. The two day symposium will be clinically oriented with the main emphasis on "Biological and Immunological Aspects of Gynecological Malignancies" and "Pelvic Infections." It is designed for the practitioners in Obstetrics and Gynecology.

Inquiries should be addressed to W. T. Creasman, M.D., Director of Gynecologic Oncology, Post Office Box 3079, Duke University Medical Center, Durham, North Carolina 27710.

### Second National Conference on Cancer Of the Colon and Rectum

The Second National Conference on Cancer of the Colon and Rectum, sponsored by the American Cancer Society, will be held September 27-29, 1973 at the Americana Hotel, Bal Harbour, Florida.

This conference will present up-dated information by leading authorities in epidemiology, pathogenesis, etiology, host factors, detection, diagnosis, treatment



and rehabilitation in cancer of the colon and rectum.

Contact: Sidney L. Arje, M.D.  
Second National Conference on  
Cancer of the Colon and Rectum  
c/o American Cancer Society  
219 East 42nd Street  
New York, New York 10017

### University of Kentucky CME Courses

- Sept. 21-22 "Nephrology for the Practicing Physician" will be held at the U.K. Medical Center. Program Chairman: Dr. Robert G. Luke. Registration fee: \$40.00. Seven (7) hours of AAFP credit have been requested.
- Oct. 1-3 "Changing Concepts and Methods in the Practice of Cardiology: The Obsolete and Old-Fashioned vs Modern and Advanced" will be held at the University of Kentucky Medical Center. Program chairman: Borys Surawicz, M.D., University of Kentucky and Charles Fisch, M.D., Indiana University. Registration fee: \$100 for members of the American College of Cardiology; \$125 for non-members of the College.
- Oct. 7-13 The Fourth Family Medicine Review will be held at the U.K. Medical Center. Program chairman: Frank R. Lemon, M.D. Registration fee: \$185. 54 hours of AAFP credit has been requested.

For further information contact Ronald D. Hamilton, M.D., Director, Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.

### Interstate Scientific Assembly: Oct. 29-Nov. 1

The 58th Annual Scientific Assembly of Interstate Postgraduate Medical Association will be held at the Palmer House, Chicago, October 29-November 1. This meeting, primarily designed for Family Physicians and Internists, is an educational service open to any licensed M.D. or D.O. in the U.S. and Canada. The fee is \$25 in advance or \$40 at the meeting, consisting of 24 hours of "live" television, lectures, symposia, medical movies and informal discussions.

Details are available from Alton Ochsner, M.D., Program Chairman, Interstate Postgraduate Medical Association, P. O. Box 5445, Madison, Wisconsin 53705.

### Symposia Medica Foundation

The Symposia Medica Foundation, in cooperation with the Royal Society of Medicine, presents an International seminar on Cardiovascular Disease to be held in London, October 12-20, 1973.

Chairman: Professor John P. Shillingford  
President, British Cardiac Society  
Registration: \$100

Further information, contact:

Cynthia Soika, M.A.  
Projects Director  
Symposia Medica Foundation  
305 East 24th Street, Suite 17-F  
New York, New York 10010

### Memphis Site of Four-Day Physician Seminar on Care of Injured, Nov. 14-17, 1973

A four-day seminar on "Life-Saving Measures for the Critically Injured" will be sponsored by the American College of Surgeons' Committee on Trauma and the department of surgery of The University of Tennessee College of Medicine, Memphis, Tenn., on November 14 through 17, 1973. It is designed particularly for rural and general practitioners.

Topics will include Assessment of the Critically Injured Patient; Pathophysiology of Shock—Clinical Correlations; Overview of Management of Critically Injured and Avoiding Medico-Legal Problems in the Critically Injured, Ventilation of the injured patient; Initial care of soft tissue wounds; Care of the multiple injury patient; Pulmonary physiology; Injuries of the lower extremity, abnormal injuries, head and spinal cord injuries; Fractures and dislocations; Blood and electrolyte replacement in the severely injured; Burns; Trauma and renal function; Coagulation and transfusion problems; The injured child; etc.

This seminar is approved by the American Medical Association for credit toward Physician's Recognition Award, by the American College of Emergency Physicians for continuing education credit for members, and by the American Academy of Family Physicians for 27 hours of credit.

For further information contact:

Dr. Harwell Wilson, professor and chairman  
Department of Surgery, University of Tennessee  
Memphis, Tennessee 38103

For housing: Holiday Inn, 969 Madison Ave.

Memphis, Tenn 38104—or—

Sheraton Motor Inn, 889 Union Ave.  
Memphis, Tenn. 38103

### 17th Annual Conference of the American Association for Automotive Medicine Set

Papers ranging from the use of automobile air bags or belts as restraint systems to a program for reducing the highway toll through better medical screening of driver license applicants will be presented during the 17th Annual Conference of the American Association for Automotive Medicine, to be held in Oklahoma City, Oklahoma, November 14-17, in the Hilton Inn West.

The purpose of the association is to encourage the development of highway and transportation safety and to promote the growth and dissemination of new knowledge in the field of traffic and vehicular safety.

Medical topics for consideration at the 17th annual meeting include "Analysis of Rollover Accident Injury Causation Mechanisms," "A Study of Injury Severity Patterns from Belted and Unbelted Passengers," "An



Objective Method of Assessing Laceration Damage to Simulated Facial Tissue," "Characterization of Lower Extremity Fractures as an Example of Accident File Data Analysis Techniques," and "Injury Mechanisms in Motorcycle Collisions."

Information on the meeting may be obtained from Page Waller, Office of Public Information and Health Education, Oklahoma State Department of Health, N.E., 10th and Stonewall, Oklahoma City, Oklahoma 73105.

### **American Association for Clinical Immunology and Allergy**

The American Association for Clinical Immunology and Allergy will hold its annual meeting at the Hilton Palacio Del Rio Hotel, San Antonio, Texas, on November 29 through December 2, 1973.

Please direct inquiries to the Program Chairman:

Robert J. Brennan, M.D.

President-Elect

American Association for Clinical

Immunology and Allergy

3471 N. Federal Highway

Ft. Lauderdale, Fla. 33306

### **Medical College of Georgia CME Courses**

<i>Date</i>	<i>Title, Location</i>
October 8-12	Family Practice Symposium, Medical College of Georgia, Augusta, Ga.
October 19	Cancer: Clinical Management, Medical College of Georgia, Augusta, Ga.
Oct. 29-Nov. 2	Internal Medicine, Medical College of Georgia, Augusta, Ga.
November 1-2	Family Planning, Medical College of Georgia, Augusta, Ga.
1974	Clinical Psychiatry, Medical College of Georgia, Augusta, Ga.
January 24-25	
February 6-8	Basic Electrocardiography, Medical College of Georgia, Augusta, Ga.
February 7	Medicine and Religion, Medical College of Georgia, Augusta, Ga.
February 14-15	Neurology in Adults and Children, Medical College of Georgia, Augusta, Ga.
March 21-23	Geriatric Problems in Family Practice, Medical College of Georgia, Augusta, Ga.
March 28-29	Gastroenterology, The Atlanta Marriott, Atlanta, Ga.
June 13-15	Internal Medicine, Buccaneer Motor Lodge, Jekyll Island, Ga.

### **National Conference on Virology and Immunology in Human Cancer**

November 29, 1973—December 1, 1973

Waldorf-Astoria Hotel

New York, New York

Sponsored by: American Cancer Society  
National Cancer Institute

The purpose of this Conference is to present to the medical and related professions the current developments in research and clinical investigation in virology and immunology and the assessment and implications of this work in the prevention and treatment of human cancer.

Sessions are open to all members of the medical and related health professions. Pre-registration is requested. There is no registration fee.

For information write:

Sidney L. Arje, M.D.

National Conference on

Virology and Immunology in Human Cancer

American Cancer Society, Inc.

219 East 42nd Street

New York, New York 10017

### **Professional Education Films Available**

NEW professional education films available in 16mm, color, from the American Cancer Society, 2519 White Avenue, Nashville, Tennessee 37204 are:

**MELANOMAS: DIAGNOSIS AND TREATMENT**—Shows a large variety of malignant melanomas, traces their natural history, and outlines the differential diagnosis of moles with special attention to junctional nevi. Depicting the diagnosis and treatment of a patient with a melanoma, this film presents principles of treatment and demonstrates wide surgical excision of localized lesions. The appraisal and treatment of regional nodes is related to patterns of lymphatic spread, which are illustrated. The need for long-term follow-up is stressed. The favorable outlook with early detection and treatment is contrasted with low survival rates where spread has occurred.

**PRIMARY CANCER OF BONE**—This film surveys the five most important classes of malignant bone tumors, and outlines how they are differentiated. Emphasis is placed on the importance of early diagnosis and treatment in improving the chance of successful outcome. Pain, swelling and disability are identified as a triad of signs that arouse suspicion of bone cancer and indicate radiography. The relative frequency of bone cancer among adolescents is pointed out, and the criteria for biopsy discussed. Representative cases are presented by a radiologist, pathologist, and surgeon, and survival rates summarized by the consultant, an authority on bone tumors.

**NURSING MANAGEMENT OF THE PATIENT RECEIVING RADIATION THERAPY**—This film shows the role of the nurse with patients being treated by radiation for cancer. The nurse and physician are seen explaining procedures to patients, and giving them instructions in matters of diet, rest, skin care, etc., as well as providing emotional support. Equipment for external radiation and devices for implanting radioactive materials are demonstrated and their uses explained. Methods are shown for protecting patients and staff from excessive radiation. Patients under treatment for lymphoma, and for cancer of the cervix, larynx, skin and other sites are interviewed; side-effects such as nausea, fatigue, diarrhea, skin reactions and loss of appetite are depicted and their management discussed.



## The Network for Continuing Medical Education

Beginning with this issue, the JOURNAL will publish regularly the schedules of upcoming medical education programs distributed by the Network for Continuing Medical Education (NCME).

NCME is an educational television service for some 100,000 physicians at over 650 hospitals and medical centers across the country.

Every two weeks (monthly during the summer), hospitals in the Network receive one-hour videotapes containing new programs on three or more medical subjects. These programs, predominantly clinical in nature, are approved for accreditation by the American Medical Association and the American Academy of Family Physicians.

Supported by Roche Laboratories, NCME provides programs without charge in most two-inch, one-inch and half-inch reel-to-reel videotape formats. Video-cassettes which may be kept, are optional at a modest fee.

As a supplement to its regular service, the NCME Master Library makes some 600 programs available on a rental or purchase basis.

For further information, contact NCME, 15 Columbus Circle, New York, N.Y. 10023.

### Schedule of Upcoming NCME Programs

Here are playing dates and upcoming programs to be distributed by The Network for Continuing Medical Education (NCME):

September 10—September 23:

**THE HYPERACTIVE CHILD: FINDING THE CAUSE**, with Gerald Erenberg, M.D., Montefiore-Morrisania Hospitals, New York City.

**ENDOAMINOSCOPY: INSIDE THE FUTURE**, with Carlo Valenti, M.D., State University of New York Downstate Medical Center, Brooklyn, N.Y.

**EARLY SURGERY FOR THE ARTHRITIC HAND**, with Alan W. Wilde, M.D., Cleveland (Ohio) Clinic.

September 24-October 7

**MANAGING THE HYPERACTIVE CHILD**, with Gerald Erenberg, M.D., Pediatric Neurologist,

Montefiore Medical Center and Morrisania Hospital, Bronx, N.Y.

**U.S. ACUPUNCTURE: STATUS REPORT, 1973**, with physicians and scientists from Boston, Cincinnati, Los Angeles and Canoga Park, Cal., New York City, St. Louis and Washington, D.C.

**ANTIBIOTIC MISADVENTURE: "THE CASE OF OVERKILL,"** with Harold C. Neu, M.D., Chief of Infectious Diseases, Columbia University College of Physicians and Surgeons, New York City. (A Drug Spotlight Program feature.)

October 8-October 21

**HOW TO OVERDIAGNOSE PULMONARY EMBOLISM**, with Edward H. Morgan, M.D., Head, Respiratory Disease Section, The Mason Clinic, Seattle, Washington.

**WHAT YOU AND YOUR PATIENT SHOULD KNOW ABOUT CORONARY ARTERIOGRAPHY**, with F. Mason Sones, Jr., M.D., Director of Cardiovascular Medicine and Cardiac Laboratory, and Donald B. Effler, M.D., Director, Department of Cardiovascular and Thoracic Surgery, both of The Cleveland Clinic.

**ANTIBIOTIC MISADVENTURE: "THE CASE OF SUPERINFECTION, PAR EXCELLENCE,"** with Harold C. Neu, M.D., Chief of Infectious Diseases, Columbia University College of Physicians and Surgeons, New York City. (A Drug Spotlight Program feature.)

**THE FOLLOWING TENNESSEE HOSPITALS ARE SERVED BY NCME:**

Baptist Memorial Hospital, Memphis; Bristol Memorial Hospital, Bristol; Clarksville Memorial, Clarksville; Jackson-Madison County General Hospital, Jackson; Meharry Medical College, Nashville; Methodist Hospital, Memphis; Nashville Memorial Hospital, Madison; Rutherford Hospital North University, Murfreesboro; St. Mary's Memorial Hospital, Knoxville; Southeast Tennessee Medical Education Center, Chattanooga; University of Tennessee College of Medicine, Memphis; Vanderbilt University Medical Center, Nashville; Holston Valley Community Hospital, Kingsport.

If your hospital is *not* presently being served, contact NCME.

\* \* \*

*"Let reverence for the laws be breathed by every American mother to the lisping babe that prattles on her lap; let it be taught in schools, in seminaries, and in colleges; let it be written in primers, spelling books, and in almanacs; let it be preached from the pulpit, proclaimed in legislative halls, and enforced in courts of justice. And in short, let it become the political religion of the nation; and let the old and the young, the rich and the poor, the grave and the gay of all sexes and tongues and colors and conditions, sacrifice unceasingly upon its altars."*

—Abraham Lincoln



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# Rondomycin<sup>®</sup>

## (methacycline HCl)

**CONTRAINDICATIONS:** Hypersensitivity to any of the tetracyclines.

**WARNINGS:** Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

**Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

**Usage in newborns, infants, and children.** (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

**PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

**ADVERSE REACTIONS: Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

**Skin:** maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

**Renal toxicity:** rise in BUN, apparently dose related (See **WARNINGS**).

**Hypersensitivity:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

**Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**USUAL DOSAGE: Adults**—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

**Children**—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

**Concomitant therapy:** Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

**SUPPLIED:** 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73



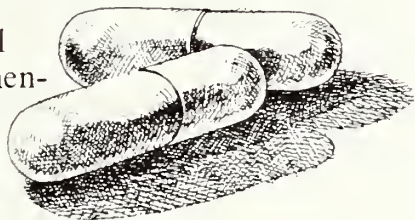
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CRANBURY, NEW JERSEY 08512



**You carry one of the heaviest patient loads in the country. Since this may include a number of patients with gastritis and duodenitis... you should know more about Librax®**

### **Helps reduce anxiety-related G.I. symptoms**

A patient may blame his attacks of gastritis or duodenitis on "something he ate" but contributing factors may be his job, marital problems, financial worries or some other unmentioned source of stress and excessive anxiety that exacerbated the condition. Whether it is "something he ate" or "something eating him," adjunctive Librax can help. Librax offers both the antianxiety action of Librium® (chlordiazepoxide HCl), that can help relieve excessive anxiety, and the dependable anticholinergic action of Quarzan® (clidinium Br), that can help reduce gastrointestinal hypermotility and hypersecretion.



### **Patient-oriented dosage — up to 8 capsules daily in divided doses**

For optimal response, dosage can be adjusted to suit patient needs—1 or 2 capsules, 3 or 4 times a day.

## **To help relieve anxiety-linked symptoms in gastritis and duodenitis adjunctive Librax®**

ROCHE

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

#### **Before prescribing, please consult complete product information, a summary of which follows:**

**Contraindications:** Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

**Warnings:** Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

**Precautions:** In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.



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## from the tennessee department of public health

### The Changing Focus in Health Delivery\*

A primary topic of interest at the national level now is the apparent intention of the Federal government to allow the states a greater voice in the allocation of tax funds to meet state and local priorities, coupled with the announced intention to curtail the funding of many health programs through categorical grant awards. The proposed budget cuts threaten to eliminate some of the favorite programs of Congress, a fact which intensifies the mounting conflict over the assertion of authority by the Executive and Legislative branches. From the Administration's proposed budget, we see a new funding strategy emerging: simply stated, a strategy in which large block grants will replace specifically designated funds. This strategy apparently represents a plan to force the states and local areas to make more realistic priority assessments, to set objectives and to be more alert in general to the actual needs of their citizens. In other words, instead of sending money out in small red, blue, green and yellow bags, with specific designations, it will go out in one great big gray bag for which we must all compete.

There are two subtle differences in these plans. They are: 1) The mass in the big gray bag will probably not be equal to the total of the smaller individual bags. It will likely be smaller. 2) Congress is not going to leave the bag on a stump in the dead of the night for us to pick up and spend in any way we choose. We are going to have to account for how we spend it.

An especially definitive description of the emerging federal posture on health care was presented by Dr. Merlin DuVal at a recent meeting in Washington. Although Dr. DuVal has left his post with the Department of Health, Education and Welfare, many of his observations have proven valid. According to Dr. DuVal, two central themes are prominent in the federal attitude toward health programs: accountabil-

ity, and a phenomenon called "cashing out" of categorical programs

The question of accountability assumes increasing importance as we consider our program needs for the future. One senior official in the Office of Management and Budget has said in reference to health: "You got to find some way to justify the return the public is getting from the large investment which has been made in health by the federal government in recent years. We know how much interstate highway—down to the foot—\$100 million will buy. But what are we getting for the \$100 million we spend for Maternal and Child Health and Crippled Children's programs?"

The point is valid, of course, and the need for accountability is certainly appreciated, but we in public health recognize the particular difficulties this movement presents for programs which are chiefly preventive in nature. How can we assess the dollar value to a community of an immunization program? How can we determine and document the cost-benefit for a baby born with no defects, a dog which is not rabid, the absence of a strep throat or the purity of our water? We have a difficult job ahead of us.

Difficult as it may be, however, it is becoming increasingly clear that we must work rapidly toward finding answers to these questions through the development of realistic means of evaluating the cost, the effectiveness, and the relative value of each of our programs and services if we hope to continue to obtain the public dollars, and in public health, of course we must.

The formulation and implementation of such standards and measures will be an area of major emphasis for my office during the coming months. In other terms, it is my opinion that the Tennessee Department of Public Health must accept a major part of the responsibility for the planning, development, and implementation of a system with the capabilities of showing four things:

- 1) What services are provided to the public (cataloging or inventory)
- 2) the cost of providing these services
- 3) the quality and value of these services

\*Excerpted from an address by Public Health Commissioner Eugene W. Fowinkle, M.D., to the annual meeting of the Tennessee Public Health Association in Gatlinburg, March 7, 1973.



- 4) a system of rechanneling categorical funding to third party payment sources or block grant mechanisms (special revenue sharing).

The effectiveness of the accountability program will depend on the involvement and cooperation of health departments throughout the state. In central, regional, and local offices we are undertaking an examination of those goals and objectives we proposed for ourselves last year in an effort to determine which of these goals are realistic and measurable. It is essential that program objectives be stated in a measurable form in order to establish the costs, effectiveness, efficiency and quality of a specific quantity of service to be provided.

Secondly, we are attempting to identify units of service as the foundation or building blocks for the entire accountability program. The objective of this effort is to provide a county-by-county and program-by-program listing of units of service provided to the public. When these listings of services and programs are compiled, they will be "field tested" for accuracy. Other considerations for the future include the establishment of a standard minimum package of service for various sizes of health departments as an incentive for high quality and efficiency. This means that a specific size health department would be expected to offer at least a minimum of services in order to qualify for state funding.

The third step of the accountability program will incorporate some intricate accounting processes to determine the actual dollar cost of providing each unit of service to the public. Several factors will be considered in arriving at this determination. These factors include:

- 1) studies of duties and responsibilities of state and local health department personnel in providing specific services in specific programs that are identifiable to the recipient;
- 2) examination of the time spent by providers in the performance of their duties;
- 3) examination of the total program budget;
- 4) costs of time, supplies, overhead, and personnel from outside the program who provide certain staff functions; and
- 5) evaluation of present program costs to forecast future costs.

Determining the quality and value of services provided—the fourth step—is probably the most essential objective of the accountability program. Certainly, the public deserves the best

health care possible, at the most reasonable cost possible. A system of evaluating the value and quality of the services will be instrumental in policy considerations concerning the future of a service or program.

Let me emphasize that "accountability" is going to be the important word in public health this year and for several years to come at the Federal and at the State level.

A second major theme in recent Federal-level statements on health care is the concept of "cashing out." This term describes the Federal administration's approach to health care delivery which will require the transfer of funding from categorical grants to third party financing mechanisms such as Medicaid. The major problems in this approach lie in situations such as the fact that only 15% of Crippled Children's Service patients in Tennessee are eligible for Medicaid. Therefore, if the total program is "cashed out" to Medicaid, 85% of it must either be financed through state monies or closed down. This categorical program, like many others, offers a valid and needed service. Many persons can be expected to protest when such services are curtailed. Similar reactions can be expected from state legislators and local governmental bodies who are told that they must absorb the costs of such programs or see them curtailed.

Further implications of the accountability and cashing out initiatives will become evident with the expiration this June of the enabling legislation for many health-related programs including Regional Medical Programs, Hill-Burton, and Comprehensive Health Planning.

These same tests of "value received for dollars invested" (or accountability) and the "existence of alternate means of providing the service" (or cashing out) have been or will be applied to these programs which are to be phased out or terminated. We have already seen, in Administration-proposed budgets, the phasing out of many health programs.

The primary conclusion that we must draw from an examination of new directions and changing influences at both national and state levels is that there are many unknowns confronting us in the health field. For instance, Public Laws 92-603 (or H.R. 1) massively overhauls the present Medicaid laws. This new law will affect eligibility requirements, rates, provision of some services, including the addition of some services, screening, diagnosis and treatment pro-

*continued on page 877*





## from the tennessee department of mental health

### **Forensic Mental Health Services In Tennessee**

Forensic Services is a relatively new concept in Tennessee. Forensic services in mental health applies to those persons who have come in contact with some aspect of the criminal justice system and who are in need of some form of mental health service. This definition includes mental health services to people when competency to stand trial is at issue, people who wish to plead not guilty by reason of insanity in criminal prosecutions, people confined in state correctional facilities, people on probation or parole care, and the families of all the above individuals. In addition to direct services to these populations, forensic service includes: programs to train and assist correctional officers and counselors in applied mental health; programs to serve local law enforcement agencies in screening of applicants; training of law enforcement agencies in the handling of mentally ill people; and instruction of mental health personnel in legal procedures regarding people in the criminal justice system.

In the past year, the Forensic Services Section of the Tennessee Department of Mental Health has been encouraging community mental health centers to provide services to local juvenile courts. Such services would include the diagnosis and evaluation of juveniles for the courts and assistance to the courts in obtaining mental health treatment for emotionally disturbed children. The aim of the service is to find alternatives to institutionalization whenever possible. The Department of Mental Health has encouraged mental health centers to appoint a liaison worker to handle all forensic matters. The Division of Juvenile Correction of the Department of Correction now works with the Department of Mental Health in the placement of mentally ill children committed to the Department of Correction. In some cases, these children are able to return to their communities for treatment at a community mental health center instead of being placed in an institution, resulting in more individualized treatment at great savings to the client and the taxpayer.

A new unit for adolescent boys has been

opened at the Forensic Services Division of Central State Psychiatric Hospital. This unit accepts emotionally disturbed children with behavior problems from juvenile correctional facilities who need greater isolation from the community. The primary goal of this program is successful return of the child to his home and community.

In order to reduce further unnecessary institutionalization, the Forensic Services Section has sought to establish forensic evaluations in major communities throughout the state. The goal is to provide screening by a psychiatrist to all clients before admission to the Forensic Services Division of Central State Psychiatric Hospital. This program would reduce the amount of time between indictment and trial for the majority of defendants whose competency has been questioned.

This summer the Forensic Services Section organized, in cooperation with the University of Tennessee-Gailor Mental Health Clinic, a multi-disciplinary team to make competency and sanity determinations of criminal defendants in the courts of Shelby County (Memphis). The team will prepare through psychiatric, medical, and psychological examinations and social histories of criminal defendants who would otherwise be sent to Nashville for 30-day evaluations at the Forensic Services Division of Central State Psychiatric Hospital. Local evaluations will enable the courts, the prosecution and defense attorneys, and the families of defendants to obtain information more readily regarding the mental health of defendants and the effect of mental illness on the defendants' charges and trial.

The old system that provides 30-day evaluations only in Nashville has been inefficient and costly. The Forensic Services Section is seeking further decentralization of evaluation services by enhancing the services mental health centers can provide. In September of this year, there will be a two-day workshop for psychiatrists, psychologists, and social workers concerning the issues of competency to stand trial, defense of insanity, and recent Supreme Court decisions. Nationally known consultants have



been invited to explain these issues and to provide practice sessions for professionals to be able to serve as expert witnesses. The consultants will analyze recent Supreme Court decisions for their implications to mental health professionals.

The Forensic Services Section has been working to build and improve relationships with the Department of Correction. Funds are being sought to help the Department of Correction plan and implement an inservice training program for counselors and guards in the state's prison system. The Section has been working through community mental health centers to develop programs of training, evaluation and delivery of mental health care with correctional facilities located in their service areas. Additional planning and assistance is being provided to community mental health centers to work with residents from the prisons and their families. In the coming year, the Forensic Services Section will make efforts to establish follow-up mental health care for residents leaving correctional facilities. An effective communication system will be established between the parole officer and the appropriate mental health center to facilitate this service.

In accordance with building and improving relationships between corrections and mental health professionals, a conference on mental health services to prison residents and their families was held at the Turney Center for Youthful Offenders with representatives from

Correction, Probation and Parole, mental health centers and mental retardation developmental centers. The symposium was co-sponsored by the Departments of Correction and Mental Health in order to establish dialogue between the Departments and mental health centers. Professionals in the two departments have begun to realize that prison populations tend to present similar problems. The provision of forensic services in Tennessee has encouraged mental health and correctional personnel to work together to meet needs of their clients.

Efforts are being made to improve services at the Forensic Services Division of the Central State Psychiatric Hospital. For years, this unit has been the only facility for people who were mentally ill and who were convicted of or charged with a crime. The nature of the unit requires the very best mental health treatment and care. Continual innovation is necessary in an area that has been long neglected by the citizens of Tennessee.

While the planning and delivery of forensic mental health services is only a year old in Tennessee, persistent efforts at communication between various state agencies and community mental health resources are beginning to have positive and beneficial results. A comprehensive approach to the state's forensic mental health problems should combine the existing resources in a way to provide mental health information and service where it has long been lacking.

\* \* \*

*continued from page 875*

grams, disability status, intermediate care and chronic renal disease programs. But until final regulations are released, it will be impossible for us at the state level to know the entire scope of the implications of this law.

The relationship of health services to general and special revenue sharing is also currently an unknown, especially in view of the cuts proposed for traditional sources of health services funding. The priorities for the expenditure of revenue sharing money are to be determined at the state and local levels, and according to

federal directives, the funds are to be used for services expansion rather than continuation of existing programs. Again, this places public health in the difficult situation of actively competing with various other programs for funding.

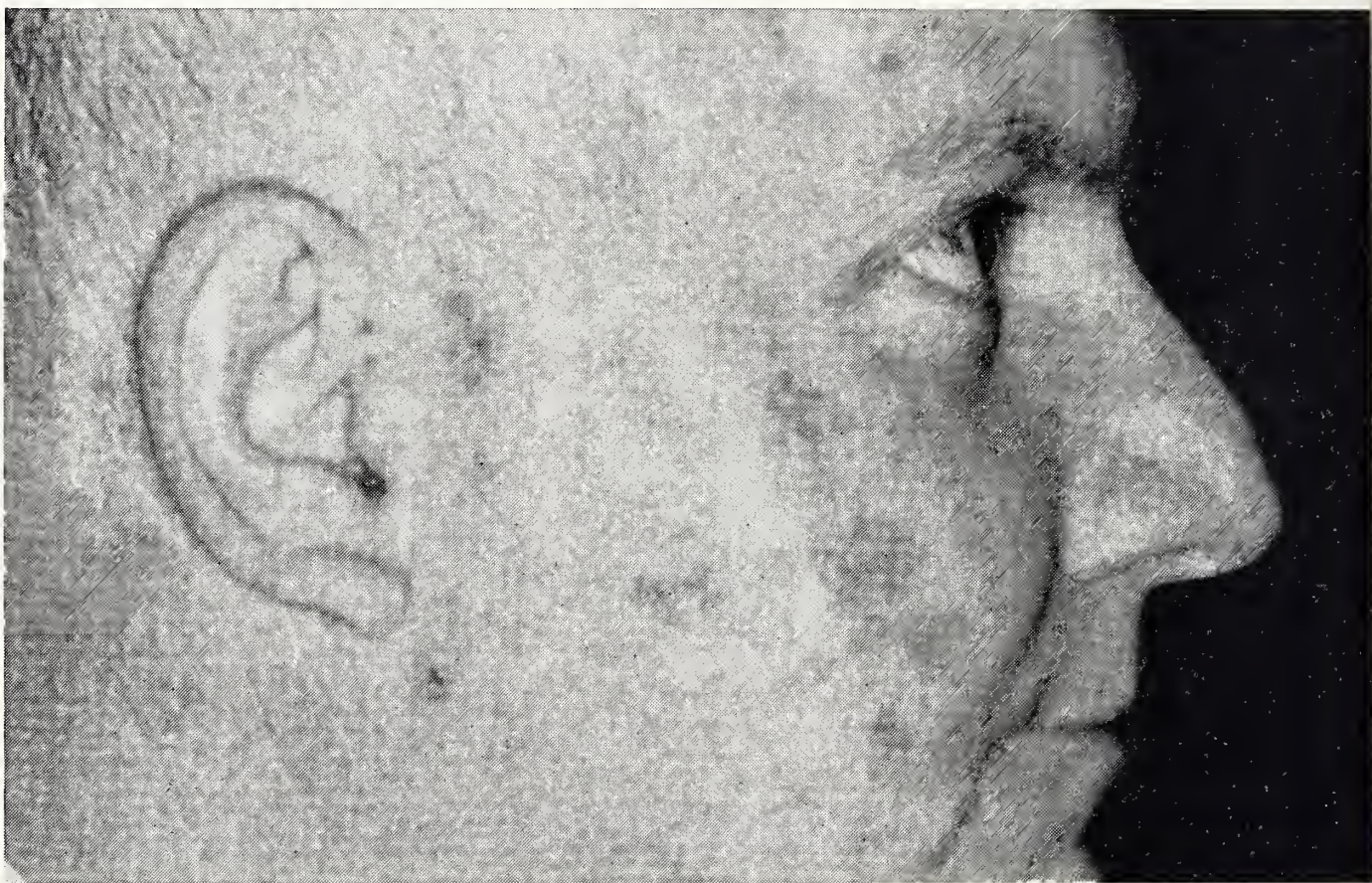
All of these unknowns and this uncertainty are unsettling and disturbing, of course, but I am convinced that, to the extent that public health is delivering valid and needed services at a reasonable cost, the prevailing trends toward greater public accountability and efficiency will be to our benefit . . . and to the benefit of the people we serve.



# What's on your patient's face...

may be more important than his chief complaint

Patient P.T.\* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.



Patient P.T.\* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

\*Data on file,  
Hoffmann-La Roche  
Inc., Nutley, N.J





**The lesions on his face  
are solar/actinic—  
so-called “senile” keratoses...  
and they may be premalignant.**

### **Solar, actinic or senile keratoses**

These lesions may be called by several names, but they usually can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

### **Sequence of therapy— selectivity of response**

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; this reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

### **Acceptable results**

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

**Indications:** Multiple actinic or solar keratoses.

**Contraindications:** Patients with known hypersensitivity to any of its components.

**Warnings:** If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

**Precautions:** If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

**Adverse Reactions:** Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

**Dosage and Administration:** Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

**How Supplied:** Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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**This patient's lesions were resolved with**

**Efudex®  
fluorouracil/Roche®  
5% cream/solution...a Roche exclusive**



# TENNESSEE VALLEY MEDICAL ASSEMBLY

(Sponsored by the Chattanooga and Hamilton County Medical Society, Inc.)

THE READ HOUSE, CHATTANOOGA, TENNESSEE

Monday, October 1, and Tuesday, October 2, 1973

## 21ST ANNUAL ASSEMBLY

*SUNDAY, September 30, 1973—6:30 p.m.*

SPEAKERS RECEPTION

Continental Room, Read House

*October 1, 1973—MONDAY, Read House*

JOHN T. QUEENAN, M.D., Louisville, Ky., "AMNIOTIC FLUID ANALYSIS FOR INTRAUTERINE DIAGNOSIS"

J. TAYLOR WHARTON, M.D., Houston, Texas, "SURGICAL PROCEDURES ASSOCIATED WITH RADIATION THERAPY FOR CERVICAL CANCER"

JOHN M. FLEXNER, M.D., Nashville, Tenn., "MANAGEMENT OF MALIGNANT LYMPHOMAS"

RALPH E. JOHNSON, M.D., Bethesda, Md., "THE NEED FOR COMBINED APPROACHES IN CANCER THERAPY"

ROBERT D. COLLINS, M.D., Nashville, Tenn., "CRITERIA FOR CLASSIFICATION OF MALIGNANT LYMPHOMAS"

12:30 p.m.

MONDAY LUNCHEON SYMPOSIA

Ballroom, Read House

—LYMPHOMAS —

JOHN M. FLEXNER, M.D.

RALPH E. JOHNSON, M.D.

ROBERT D. COLLINS, M.D.

Moderator: Winston P. Caine, M.D.

12:30 p.m.

OB-GYN—

J. TAYLOR WHARTON, M.D.

JOHN T. QUEENAN, M.D.

Moderator: Peggy Howard, M.D., and W. Powell Hutcherson, M.D.

13 Hours (prescribed), American Academy of Family

Practice Continuation Study credits

*October 2, 1973—TUESDAY, Read House*

Continental Room

Christian Medical Society Breakfast

Speaker: J. LAWTON SMITH, M.D., Miami Florida

*October 2, 1973—TUESDAY, Read House*

GEORGE C. MORRIS, JR., M.D., Houston, Texas, "PERSONAL EXPERIENCE WITH 2000 PATIENTS HAVING CORONARY ARTERY BYPASS"

JAY S. GOODMAN, M.D., Baltimore, Md., "COMMON ANAEROBIC INFECTIONS: PRACTICAL ASPECTS"

J. D. MILLAR, M.D., Atlanta, Ga., "ATTACKING TODAY'S VENEREAL DISEASE CRISIS"

J. LAWTON SMITH, M.D., Miami, Fla., "THYROID EYE DISEASE"

JAMES D. HARDY, M.D., Jackson, Miss., "THORACIC ANEURYSMS: DISSECTING AND NONDISSECTING"

12:30 p.m.

TUESDAY LUNCHEON SYMPOSIUM

Continental Room, Read House

—VASCULAR SURGERY—

GEORGE C. MORRIS, JR., M.D.

JAMES D. HARDY, M.D.

Moderator: David P. Hall, M.D.





## Accountability—A Bitter Pill

The common denominator of the rapid and revolutionary changes in the active practice of Medicine in America is accountability.

The physician has always accepted and, in fact, promoted accountability in patient care. It has always been part and parcel of medical practice. The rub is that today accountability is demanded by others than the patient or the profession. Accountability to government, to other third parties, and to the public in general, is a bitter pill for many doctors, especially those of the older generations. But, accountability to the public is here to stay.

Accountability to society is a way of life in our modern and complex civilization. It is the cost of the increase of our population. Individual freedom decreases with increase in the number of individuals—in the community, in the nation, or in the world. With increasing dependence upon each other, there is decreasing freedom of action of each. Most physicians accept this fact, but many of us do not recognize its application to our work. Many physicians can accept with equanimity numerous complexities of population growth, but they are bitterly intolerant of similar complexities in their professional life.

Third party payment has become the primary method of payment for medical care. The carrier, whether it be government or private insurance company, has a fiscal responsibility it cannot avoid. The third party is accountable and in turn must demand that the purveyor of care, doctor or hospital, be accountable. The third party demands accountability by the hospital which in turn must have accountability from the doctor. The third party must demand direct accountability from the physician in his office.

The doctor-patient relationship is the bulwark of medical care in America—the best in the world. Preservation of this relationship is possible only if there be professional control of

accountability. Many dedicated physicians are involved in movements which aim to keep the profession in control. Peer review, in the hospital, in Blue Shield, and in the Foundation, has this goal. Most of these efforts by physicians are voluntary. The effort and sacrifice of some are gigantic. Yet, often these doctors are criticized and even accused of capitulation. Such criticism and accusation is grossly unfair. In fact, it is stupid!

Certainly, the physician must know that a pill may be bitter but also may be necessary.

The Congress of the United States recently passed public law 92-603, amendments to the Social Security law, or HR1 as it is commonly known. This new law sets forth criteria for the development of peer review organizations (PSRO's) throughout our country prior to January 1, 1976. This law initially and clearly gives the responsibility for the PSRO development and control to the medical profession.

In a recent meeting of the American Association of Foundations for Medical Care, Senator Peter Dominick of Colorado discussed "Peer Review: An Opportunity for Freedom." Over the past decade of increasing government intervention we have been searching for, and working for, a way to keep control of the practice of medicine. The opportunity is now here. However, should the medical profession not be up to the task, there is provision in the new law for other organizations to establish and control the PSRO's.

The recently appointed PSRO Director, Dr. William Bauer, comes from Greeley, Colorado. He is a strong advocate of private practice. He is soliciting input of the medical society and of the private practitioner in the development of PSRO's. As Senator Dominick said, here is the opportunity to continue the private practice of medicine as we know and believe it should be practiced. He suggests that we continue our responsibility to the patient by addressing ourselves to the problems at hand as well as to the problems of the future.

JOHN WOOD, M.D.

Reprinted from the  
*Rocky Mountain Medical Journal*,  
June, 1973



## Answers to the Cooper Quiz (from pages 836-837)

THE AMERICAN JOURNAL OF MEDICINE

October 1972

1. TRUE. "Phylogenetically, prolactin is the oldest among the polypeptide hormones secreted by the pituitary gland. The diversity of functions which it serves among a wide variety of primitive vertebrates is correspondingly great. Comparative endocrinologists have described more than twenty different physiologic effects of prolactin in teleost fishes, amphibians, birds and mammals. . . . In birds prolactin induces broodpatch formation initiates premigratory fattening and stimulates hepatic lipogenesis. The regulation of prolactin on these functions of the brain (behavior), kidney, liver and the skin and its appendages has apparently depended upon successful interaction between the polypeptide hormone and hormone-specific receptor structures which have been retained in some form throughout evolutionary development in the various target organs. However, the possibility that prolactin might be of clinical relevance in the function of these organs in man has only recently been suspected." (p. 389)
2. TRUE. "The relation of prolactin secretion to the regulation of mammary gland function in man appears to be essentially clear. Tactile stimuli at the breast and chest wall and psychogenic stimuli are transmitted as neurogenic impulses to the median eminence and to other centers of the hypothalamus to impair the secretion of prolactin-inhibiting factor into the pituitary portal blood." (p. 390)
3. FALSE. "In addition to its well recognized regulation of mammary gland function, prolactin also appears to exert a regulatory influence on several other target organs, and these extramammary actions of prolactin have potential importance in the pathogenesis of human disease. A pronounced action of prolactin on the kidney has been demonstrated in several species. . . . Horrobin and co-workers have demonstrated that following a single injection of sheep prolactin in human volunteers renal excretion of water, sodium and potassium is decreased and serum sodium and serum osmolality are increased. The recent demonstration of hormone-specific binding activity characteristic of a prolactin receptor in the low speed sediments from kidney homogenates is also evidence that prolactin interacts with the kidney as a target organ. The actions of prolactin on the kidney to promote sodium and water retention may represent a factor in the formation of edema under various clinical conditions and is worthy of further clinical investigation." (p. 390)
4. TRUE. "Patients with craniopharyngioma, ectopic pinealoma or metastatic carcinoma in the hypothalamus frequently evidence release of the inhibitory influence of the hypothalamus over prolactin secretion, and the increased secretion of prolactin may initially be the only endocrine manifestation of hypothalamic disease. . . . Turkington and MacIndoe found hyperprolactinemia in eleven of thirty-four patients with evidence of extrapulmonary sarcoidosis. The relatively high frequency of hyperprolactinemia in this series of patients with sarcoidosis suggests that the plasma prolactin concentration may represent a sensitive index of the presence of central nervous system involvement in sarcoidosis." (p. 391)
5. COBALT. "In 1966 an apparently new, bizarre syndrome characterized by fulminating heart failure in heavy beer drinkers appeared in Quebec City, Canada. The victims suffered from severe cardiomyopathy which apparently resulted from drinking a brand of beer to which cobalt had been added. Some time later the syndrome was recognized in Omaha, Nebraska and in Minneapolis, Minnesota and probably went unrecognized elsewhere. Two of the most unique features of the syndrome, i.e., the pericardial effusion and elevated hemoglobin levels, were recognized in Belgium by Kesteloot who, however, was unaware of their relationship to cobalt." (p. 395)
6. FALSE. "The cobalt-beer story began, it seems, with the advent of synthetic detergents and their extensive use in washing glassware. Despite rinsing, a thin film of detergent often remains and tap beer poured into such a glass leaves little or no foam (head) at the top which is esthetically undesirable to the average beer drinker. This foam could be restored and stabilized by adding cobalt chloride to the beer after its manufacture. The process of adding cobalt chloride to beer, originally patented by a Danish industrial chemical firm, was apparently leased to a firm in a large midwestern city which, in turn, made the process available to American breweries." (p. 403)
7. LOWERS IT. "The acidosis, lactic acidemia and hypocapnia have the over-all effect of decreasing myocardial contractility and decreasing coronary flow. Myocardial metabolism is profoundly affected by interference with the citric acid cycle as well as by decreased coronary blood flow. The initial event is myocardial failure secondary to malnutrition, alcohol and cobalt. This is followed by congestive heart failure with low cardiac output associated with hyperventilation. This increased work of breathing increases the oxygen requirement while it decreases  $PCO_2$ . Hypocapnia increases peripheral vascular resistance and promotes lactic acidosis, and with the low cardiac output adds to tissue ischemia and to further accumulation of lactic acid. Triglyceride and glycogen accumulate in the myocardium, probably as a result of interruption of the citric acid cycle which is the only metabolic pathway that the heart can use for oxidative metabolism. In an attempt to alleviate this unfavorable situation, it was found useful to correct intracellular acidosis with THAM,



extracellular acidosis with sodium bicarbonate and to use morphine to decrease lactic acid. Morphine slows respiration and has been found to specifically lower lactic acid levels in the blood. Its use has been recommended for patients who have increased lactate production." (p. 408)

EDITOR'S NOTE: THAM = Tris buffer

8. TRUE. "In pigs, poultry, ruminants and human beings vitamin B<sub>12</sub> is an essential nutrient, which is required for the synthesis of the labile methyl group of methionine from other amino acids. Vitamin B<sub>12</sub> is the only known material in the body that requires cobalt. The amount required for health varies with age and species: 10 µg/kg/day for pigs, 6 µg/kg/day for children and 0.014 µg/kg/day for man." (p. 412)
9. TRUE. "Although the cardiotoxic effect of ethanol is still a controversial issue, there is much evidence in animal and human studies that chronic ethanol administration adversely effects the ultrastructure and performance of the heart. It seems reasonable to assume that the average patient with cobalt-beer cardiomyopathy had clinical or subclinical heart damage from chronic ethanol intake and malnutrition for months or years before cobalt came into the picture. The new insult of cobalt changed the tempo of the disease from a slowly progressive one to a fulminating one, characterized in many cases by the abrupt onset of ventricular failure which could not be reversed." (p. 414)
10. INSULIN. "The discovery that proinsulin, the single chain precursor of insulin, may be found in circulating plasma of human subjects has led to much speculation and a great amount of investigation of the role and importance of this hormone in plasma. This interest has been further stimulated by the fact that proinsulin has much less biologic activity than insulin." (p. 418)
11. FALSE. "Similarly, obesity alone had only a slight effect on IRP levels. IRP levels were higher in the obese subjects than in the normal weight subjects, but these differences were not statistically significant. TIR levels in the obese subjects, however, were considerably greater than the normal levels."  
"When the effects of obesity and diabetes were combined, there were marked changes in IRP levels. TIR responses in lean and obese diabetic subjects were very similar, but the IRP response was significantly greater in the latter. Obese diabetic subjects also had greater IRP levels and IRP:TIR response than either the normal older subjects or the thin diabetic subjects. Although the IRP levels and IRP:TIR response were highest in the older obese diabetic subjects the IRP response was highest in the young diabetic subjects." (p. 426)
12. FALSE. "The significance of proinsulin in the plasma of normal or diabetic subjects has not been established. We have shown by this study, as have others, that the high levels of insulin-like im-

munoreactive materials in the plasma of patients with adult-onset diabetes mellitus and other forms of carbohydrate intolerance cannot be fully explained by an increase in proinsulin." (p. 426)

13. TRUE. "A study of twenty patients proved to have *Pneumocystis carinii* pneumonia revealed that the clinical presentation of *Pneumocystis* infection may vary from fulminant to inapparent pneumonia and may be masked by preexistent pulmonary disease. Rapidly progressive *Pneumocystis* infections are characterized at an early stage by symptoms indicating more severe pulmonary compromise than suggested by either the physical examination or chest roentgenogram. In these cases, particularly, an aggressive approach to make a specific diagnosis should be considered. Even when pentamidine therapy is initiated early in the course of proved infections, the survival of the patient may be jeopardized by other concomitant infections or neoplastic pulmonary lesions. It is therefore important that thorough histopathologic and microbiologic studies be performed in order to identify the presence of any other potentially treatable pulmonary disease which may complicate *Pneumocystis* pneumonia." (p. 428)
14. TRUE. "It is apparent that in patients in whom aortic insufficiency develops Reiter's syndrome tends to be more severe than in the usual patients. They have recurrent or prolonged disease with a high incidence of sacroiliitis, iritis and myocutaneous manifestations. There is an average lapse of about fourteen years before aortic insufficiency is noted. The incidence of first degree atrioventricular block is striking.  
"Although it may merely represent the chance selection of more severe cases of Reiter's syndrome by a referral center, it is quite possible that our finding of five cases of aortic insufficiency in 105 patients with Reiter's syndrome indicates that this combination occurs more frequently than previously suspected. However, since the inflammatory lesions of the areas adjacent to the aortic ring are probably episodic in character, patients with minimal aortic insufficiency may not require specific therapy for many years after the onset of the murmur, and the prognosis in selected patients may be quite good." (p. 472)

*ARCHIVES OF INTERNAL MEDICINE,  
OCTOBER, 1972*

15. 0.60. "Bile acids are formed in the liver from cholesterol and secreted into the bile. After storage and concentration in the gallbladder they are secreted into the intestine after ingestion of a meal, and there they play an important role in facilitating the absorption of dietary lipids. Bile acids themselves also are absorbed from the small intestine; they are carried in the portal blood back to the liver where they are resecreted into the bile. This enterohepatic circulation is so efficient that each day the relatively small pool of bile acids, approximately 2.0 to 4.0 gm, is cycled through



the intestine from 6 to 10 times, yet only a small amount, approximately 0.6 gm, is lost in the feces. Also, each day an amount of bile acid equivalent to that lost in the feces is synthesized from cholesterol by the liver so that a pool of constant size is maintained." (p. 473)

16. TRUE. "From these considerations it is apparent that bile acids serve two useful functions. First, since they are the end-product of the degradation of cholesterol by the liver, bile acid formation and ultimate elimination in the feces represents one of the major mechanisms for excretion of the steroid nucleus from the body. . . . Second, during their transit through the small intestine, bile acids facilitate absorption of lipids from the intestinal contents into the intestinal mucosa, and, in addition, they also may act to regulate certain metabolic processes within the absorptive cell." (p. 473)
17. TRUE. "All evidence available at present indicates that cholesterol is the obligatory precursor of the bile acids in all vertebrates. The liver is the sole organ capable of carrying out the transformation of cholesterol to hydroxyl-substituted cholanoic acids.  
"Bile acids formed from cholesterol in the liver are commonly termed primary bile acids. They undergo complex changes in their nuclear oxygen functions during enterohepatic cycling resulting in the formation of secondary bile acids." (p. 478)
18. TRUE. "Under normal conditions the rate of hepatic bile acid synthesis is low, 200 to 500 mg/day in man. This rate is just sufficient to replace the daily loss of bile acid in feces and urine. If the circulating bile acid pool is removed by biliary diversion, or diminished by administration of cholestyramine resin, hepatic bile acid production increases five to ten times. These and other observations led to the conclusion that bile acid biosynthesis is controlled by a mechanism of negative feedback. This implies that the rate of biosynthesis varies inversely as hepatic bile acid flux (mass of bile acid transferred across liver per unit time)." (p. 485)
19. FALSE. "Bile acids, themselves end products of cholesterol catabolism, act to regulate virtually every step in cholesterol metabolism, including dietary absorption, endogenous synthesis, excretion, and bile acid formation. Although many aspects of the interaction between bile acids and cholesterol are poorly understood, in regard to bile acid synthesis the effect of bile acids is homeostatic. On the one hand, bile acid formation increases following bile acid deprivation in order to provide adequate bile acids to maintain fat absorption, whereas bile acid excess in the diet or circulation is compensated by diminished bile acid synthesis." (p. 493)
20. FALSE. "One clinical aspect of the feedback control of hepatic cholesterol synthesis deserves special comment. The hypercholesterolemia that results from disorders associated with biliary cir-

rhosis and obstruction of the biliary tract has been presumed to be the result of accelerated synthesis of cholesterol in the liver of affected patients, a concept that is in accord with the accelerated hepatic synthesis that results from bile duct obstruction in experimental animals. However, it is likely that the enhancement of cholesterol synthesis in biliary obstruction is the passive consequence of the loss of the inhibition of cholesterol synthesis that ensues following the removal of bile acids from the gastrointestinal tract." (p. 499)

EDITOR'S NOTE: If you disagree with the answer, please read the last sentence again.

21. FALSE. "It is not certain whether a cholesterol-bile acid feedback exists in man. Although increased bile acid production after cholesterol feeding has never been reported in human subjects, negative results in man could be due either to an inability to accelerate bile acid production as in the rabbit or to the fact that in man the maximal rates of absorption are so low as to allow the complete compensation by inhibition of endogenous cholesterol synthesis." (p. 501)
22. TRUE. "The bile salts which are apparently produced by all vertebrates have long been regarded as possessing a dual function, acting (1) as a solvent for lecithin and cholesterol in bile and consequently aiding the excretion of these otherwise insoluble endogenous lipids and (2) as a solvent for insoluble dietary lipids in the intestine, thus promoting their absorption." (p. 506)  
EDITOR'S NOTE: We don't want to mislead you, so let us admit that this one question came from a long paper discussing "Micelle Formation by Bile Salts."
23. FALSE. "The liver is responsible not only for the synthesis of bile acids but also for their excretion into the bile and for the uptake and reexcretion of bile acids returned via the enterohepatic circulation. These processes constitute the major contribution of the liver to the digestion and absorption of dietary lipids, but in addition, hepatic bile acid secretion is a fundamental step in the physiology of bile formation itself and has a profound influence on the volume and composition of bile." (p. 533)
24. TRUE. "These studies demonstrate that biliary function in terms of bile salt secretion and synthesis is altered during the postoperative period. In animals with total bile fistula, bile salt secretion was markedly depressed for several weeks after operation. Even with an intact EHC, normal secretion was not attained until about 14 days after operation. The depressed secretion rates of bile salt in these animals may result partly from the ineffective synthesis of new bile acid and the delayed establishment of a new bile salt pool.  
"Severe debilitating illness such as pneumonia or tuberculosis in monkeys produces similar depressions of the secretion and synthesis of bile salts." (p. 557)



25. TRUE. "The secretion rate of bile salt is important in that it governs in part the secretion of cholesterol from the liver. If the secretion rate of bile salt is too low, unstable abnormal lithogenic bile can result. Further, the secretion rate of bile salts is related to the process of fat absorption. If it is normal, fat is well absorbed. If it is low, fat is poorly absorbed and fat-soluble vitamins are not at all absorbed." (p. 567)
26. TRUE. "The clinical conditions that produce complete interruption of the EHC are for instance bile fistula due to surgery or cholecystoureteral fistula. Partial interruption of the EHC may be produced by partial bile fistula, ileal bypass or resection, or ileal disease. Treatment with cholestyramine or other bile acid-binding agents also amounts to pharmacological partial interruption of the enterohepatic circulation. A characteristic of all of these syndromes is an increased rate of loss of bile salt from the individual and, thus, these conditions can be termed 'bile salt wasting' syndromes." (p. 569)
27. DECREASED. "Any severe liver disease involves hepatocellular damage. The classic example is acute viral hepatitis. In general, pool size is probably decreased, as are synthesis and secretion rates. The bile salts are distributed in both the portal and extraportal enterohepatic circulations. Clearance of intravenously administered bile acid is poor. Serum concentrations are often so high that sufficient quantities of turn off synthesis may be recirculating to the liver through the hepatic artery. However, because clearance is so poor, it may be argued that the bile salts do not enter the cell. In fact, it is not necessary to postulate return to explain depressed synthetic rate. Decreased hepatic cell mass injury and abnormal function are probably adequate to explain the depressed synthesis." (p. 571)
28. LIPASE AND COLIPASE. "Bile salts appear to enhance the overall process of lipolysis in vitro and in vivo under most conditions. Bile salts could affect the lipolysis of triglycerides by direct interaction with the enzyme independent of the fact that the reaction occurs at the oil-water interface or they might influence the association of lipase with a protein recently described and termed colipase. They could also increase the interface available for the reaction by stimulating the emulsification of large triglyceride droplets and converting the substrate into a small stable droplet emulsion. Bile salts could align the substrate at the interface for subsequent enzyme action or they might remove the products of lipolysis from the interface and thus reduce product inhibition of the enzyme reaction. There is evidence for several of these possibilities although the quantitative importance of each has not been established." (p. 575)
29. FALSE. "Bile acids are formed in the liver from cholesterol, participate in an enterohepatic circulation and, ultimately, are excreted in the feces. These acidic steroids serve two important physiological functions. First, the hepatic conversion of cholesterol to bile acids and their ultimate excretion in the acidic steroid fraction of the feces represents one of the two major pathways for excretion of steroids from the body; hence, alterations in the rate of bile acid formation and excretion have profound effects upon overall cholesterol metabolism in the body. Second, during their transit through the small intestine, bile acids also act to facilitate the absorption of dietary lipids into the intestinal absorptive cell. Thus, one of the common features of diseases that significantly interfere with the enterohepatic circulation of bile acids is malabsorption of dietary fat and consequent steatorrhea." (p. 584)
30. TRUE. "Two syndromes of bile acid malabsorption caused by ileal resection—bile acid diarrhea (cholerheic diarrhea) and fatty acid diarrhea (steatorrheic diarrhea)—have been identified, characterized, and symptomatic therapy has been developed. In patients with small resections, bile acid malabsorption is mild, and compensatory increase in hepatic synthesis of bile acids is sufficient to restore their secretion. The increased passage of bile acids into the colon causes diarrhea. In patients with large resections, bile acid malabsorption is severe, and increase in bile acid synthesis is insufficient to restore their secretion. This results in impaired micellar dispersion of lipolytic products and malabsorption of fat. Diarrhea responds to removal of long-chain triglycerides from the diet, suggesting that unabsorbed fatty acids or their bacterial products cause the diarrhea in these patients." (p. 597)
31. FALSE. "Unremitting itch may trouble the patient with biliary obstructive disease. Recent investigations suggest that levels of bile salts correlate with pruritus and levels on the skin surface correlate better than those in serum. Cholestyramine reduces these levels and relieves pruritus. Its greater avidity for dihydroxy bile salts, and the severalfold over-representation of this group in cutaneous surface film, suggest that they may represent a more significant cause of pruritus than cholate, the trihydroxy compound. Though still poorly understood, the mechanism by which bile salts induce itching may involve release of a secondary mediator, perhaps endogenous protease, in skin." (p. 632)



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**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

**Warnings.** *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

**Precautions.** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

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## INSTRUCTIONS TO CONTRIBUTORS

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, John B. Thomison, M.D., P.O. Box 70, Nashville, Tennessee 37202.

Manuscripts must be typewritten on one side of letterweight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer. The pages should be numbered and clipped or stapled together, but they should not be placed in a binder.

Bibliographic references should not exceed twenty in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, FG: What is Known About it, J. Tennessee M. A., 35:132, 1950.

Illustrations should be numbered and identified with the author's name. The editor will determine the number, if any, of illustrations to be used with the Journal assuming the cost of engravings and cuts up to \$25. Engraving cost for illustrations in excess of \$25 will be billed to the author. They will not be returned unless specifically requested.

If reprints are wanted, the desired number should be indicated in the letter accompanying the manuscript. No reprints are provided free and a reprint cost schedule will be forwarded upon request.



## *Partial Hospitalization in a State Psychiatric Facility\**

ALVIN J. SUMMAR, M.D., MICHAEL H. WILKINS, MSW

In the past few years we have seen enumerable movements in the methodology and approaches to treatment and care and rehabilitation of the mentally ill. The present trend in government funding has a strong emphasis toward accountability. That is, an institution be it large and custodial, short term and intensive or a regional mental health clinic, must document its therapeutic benefits from an economic standpoint. In effect the federal, state and local governments are saying "Let's get the most from our existing resources."

Though partial hospitalization was first reported in the 1930's, it was in the 1960's that we saw it become a firmly entrenched modality of treatment in the United States. This was undoubtedly a result of the stipulation given to regional mental health clinics by the federal government that a facility must provide partial hospitalization in the form of day and night care in order to receive comprehensive mental health funding.

With passage of time we find an increasing number of advocates that firmly believe that repeated and consistent research done on partial hospitalization has proven that we can (1) treat and rehabilitate more patients at less cost, effectively utilizing higher level professionals than is possible with inpatient care; (2) we can maintain patients in their communities and with their families as contributing members; and we can (3) better respond to the needs of the community at large.

In March of 1972, Tennessee Psychiatric Hospital and Institute, a short-term intensive care state facility involved in research, treatment

and education, implemented a day treatment, partial hospitalization unit. The unit was designed to function both as an alternative to inpatient care and as a transitional facility. The plans were to take over a unit that had been a 24-bed inpatient unit, remodeling the larger ward rooms to function as areas for activity such as groups, occupational therapy, arts, current events, etc.

Our staff would include a psychiatrist, social worker, psychological examiner, two nurses, four psychiatric technicians, and an adjunctive therapist. The psychiatrist and psychological examiner would be half time on the unit, and the rest would fulfill other responsibilities. Staff would be selected by the co-directors on the basis of flexibility, judgment and commitment to the stated program philosophy. Provisions would be made for data collections that could later be utilized in a statistical research design. The criteria for patient selection allowed for a great deal of latitude. In the implementation of our program we preferred that the patient should have good vocational and social rehabilitative potential and a responsible relative or friend when the patient was at home. Though we recognize prior psychiatric diagnosis, we did not accept it as a criterion for selection or rejection into the program. The limitations were that voluntary participation was mandatory; hospital requirements had to be met; and the patient had to provide his own transportation.

As the unit census began to increase we discovered that many applicants for admission to inpatient care preferred day hospitalization feeling there was less stigma attached to being in treatment during the day and going home at night. We observed that it was much easier to

\* From the Tennessee Psychiatric Hospital and Institute, Memphis, Tenn., 38104.



involve the family unit in the treatment plan, possibly because the identified patient was still residing at home. Other inpatient units began to view us as a bridge to the community, a modality that could enable their patients to reintegrate into community life by phasing away from full-time care. We were referred outpatients whose problems could not be dealt with in once-a-week therapy and people in crisis situations who would otherwise have been hospitalized.

The program itself is moderately structured while still individualized. The initial interview is conducted by the entire staff with the patient. The program is explained; his presenting problems listened to; and a verbal contract is made defining our intentions and obligations and his responsibilities. He may choose to accept, reject or consider for a time the program. Once accepted he is given a psychiatric evaluation, psychological examination and social assessment. An individual treatment plan is made of which he is advised; and routine and regular reviews are made as to his progress or lack of progress. It is not uncommon to change approaches if the staff and patient feel they are pursuing a futile method.

Auxiliary agencies such as Social Security, The Department of Public Welfare, The Division of Vocational Rehabilitation and volunteers are utilized when indicated. Family therapy and a group composed of relatives and family members have been employed at various times.

Preliminary review of our existing data has

shown that we have had favorable results during the past year in regards to job placement and lack of recidivism.

An encouraging note is that in July, 1972, we officially opened the night care unit staffed virtually by the same staff and maintained on the same unit. This added 16 beds for those who could function on the job but needed temporary support and protection in the evening. Maximum census for Day Care is 30, for Night Care, 16. At full capacity this enables us to care for 46 patients whereas on the same unit only 24 could have been treated previously.

As with any program we have encountered difficulties. A lack of transportation disqualifies many who would choose to attend. Many third party carriers do not honor partial hospitalization. This penalizes the patients from being cared for on a modality that would cost the insurance company one-half as much. There seems to be a direct correlation between staff morale and the number of patients. The more patients, the higher is the morale. More referring agencies should be made aware of the program, so that a greater patient populace could be reached.

We conclude by stating that we are enthusiastic and pleased with the partial hospitalization program at this hospital. We anticipate that in the near future research data confirming our belief in its effectiveness will be forthcoming. We hope others might consider utilizing partial hospitalization as a valuable addition to their presently existing services.

\* \* \*

### **Clinical Center Studies of Patients With: 1. Acromegaly 2. Hirsutism and/or Virilization**

The cooperation of physicians is requested in the referral of patients for two studies being conducted by the National Institute of Child Health and Human Development's Reproduction Research Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients with either untreated ACROMEGALY, or treated but still active acromegaly, are being sought for a trial with medical therapy.

Patients with HIRSUTISM and/or VIRIL-

IZATION are being sought for endocrine evaluation and therapy.

Upon completion of studies, patients will be returned to the care of the referring physician who will receive a summary of findings.

Physicians interested in having their patients considered for admission may write or telephone:

D. Lynn Loriaux, M.D.  
Clinical Center, Room 10B-09  
National Institutes of Health  
Bethesda, Md. 20014  
Telephone: (301) 496-5800 or  
(301) 496-4686



# Using Reality Therapy Techniques With Children and Youth

WILLIAM C. GODSEY, M.D., WILLIAM L. COTTRELL, JR., M.Ed.

William Glasser, M.D., psychiatrist, lecturer, educator, and president of the Institute for Reality Therapy in Los Angeles advocates a common sense, practical, and down-to-earth approach for dealing with young people and adults who have emotional problems. He discusses his approach in detail in two of his books, *Reality Therapy*, 1965, and *The Identity Society*, 1972 (Harper and Row).

It is doubtful that any approach to the rehabilitation of those experiencing emotional problems is in itself a panacea. However, Dr. Glasser has experienced wide success and many practitioners throughout the United States and Canada such as physicians, psychologists, educators, social workers, etc. are now finding that Reality Therapy techniques have much to offer those disciplines working with persons experiencing emotional disorders.

One of the key words in the practice of Reality Therapy is involvement. Glasser believes that involvement must exist between the patient and therapist. In a vast majority of cases, persons experiencing emotional problems are lonely and uninvolved with other people. Their self-concept is one of failure. Glasser believes that young people today are seeking a role as opposed to a goal like many preceding generations. This role is one of identity in today's society. Previous generations were goal oriented, and roles were associated with goals which people sought. Glasser does not believe the new role oriented society is bad, but he insists that those who work with younger persons today should realize that a vast majority are concerned more with identity than goals if they are to work successfully with them. He further believes that when people find their identity, they then move toward their goals. Involvement between the therapist and the patient can help the patient find his identity.

The Reality Therapist must be warm, personal, friendly as opposed to an "objective therapist." Persons having emotional difficulties are doing badly in life and are characterized by feelings of misery and loneliness. In order to break the ice, the Reality Therapist must become

involved with those who are lonely and doing badly in facing the problems of life.

Dr. Glasser listed in his book, *The Identity Society*, seven steps involved in the implementation of Reality Therapy. These are:

(1) The therapist should be personal and involved with the patient.

(2) Current behavior should be emphasized. Present behavior is emphasized by the therapists at the Child and Adolescent Center of Western State Psychiatric Hospital by such questions as: "What are you doing?" The therapists at the Center using Reality Therapy techniques rarely ask a patient why he is acting a certain way. Glasser has stated that we are often quite unaware of what we are doing as revealed by the use of video tape recorders. Feelings are not ignored; they are accepted. According to Glasser there is an extremely high correlation between acting responsibly and feeling better. It is also true that an individual who is uninvolved and acting irresponsibly usually feels very bad. In focusing on behavior by emphasizing questions such as what instead of why, the therapist is helping the patient to become more aware of his behavior.

(3) The patient should look at his own behavior and make a value judgment as to whether this behavior is his best choice.

(4) The therapist and the patient must develop a flexible plan for alternative responsible behavior. This plan must be for a short period of time at first, allowing success experiences and building up of the confidence of the patient in himself. It is not expected that he should totally reform his life all at once. His change to more responsible behavior and better adjustment to life must be accomplished in small blocks of time.

(5) The patient must commit himself to this plan. Any plan involving the behavior of the patient is obviously of very little value without his willingness to commit himself to the implementation of this plan.

(6) The therapist must accept no excuses from the patient as to why he did not live up to the plan. If the plan is still believed to be



reasonable, either the patient must recommit himself to it or the patient and therapist should make another plan. The therapist should continue to remain involved with the patient and ask him to honor the plan once he commits himself to it. One of Glasser's pertinent instructions to the therapist is, "you never give up."

(7) The last step of Reality Therapy is not to use any "punishment." He defines punishment as something punitive or harmful to the individual. Natural consequences to behavior are emphasized. Glasser maintains that punishment breaks the involvement of the therapist with the patient and confirms the belief of the patient that no one cares about him.

Reality Therapy is not permissive. It emphasizes the placing of reasonable responsibility on the patient. Glasser adds that "Reasonably agreed upon consequences of irresponsible behavior are not punishment." Glasser gives as one example of a consequence of irresponsible behavior speeding tickets that are issued by law enforcement officials to persons caught speeding. However, Glasser does not define this as punishment. Instead he states that a person takes an examination for a driver's license. This license is to determine his familiarity with the laws of driving a vehicle. Therefore, when a person receives a ticket for speeding, he should not be surprised. It is a natural consequence. He knew the speed limit, and therefore, the ticket is surely a natural result of failure to keep his commitment to obey the rules of the road.

### **Clinical Center Study of Patients With Malignant Melanoma**

The cooperation of physicians is requested in the referral of patients with malignant melanoma for studies being conducted jointly by the National Cancer Institute's Immunology, Surgery, and Medicine Branches, at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

The purpose of this study is to evaluate the effects of chemotherapy and immunotherapy in patients with malignant melanoma. Needed are patients with Stage III disease (i.e., clinical evidence for systemic metastasis), and Stage II disease (i.e., clinical evidence for regional draining lymph node metastasis).

Patients with Stage III disease must be 70 years of age or younger, must not have received prior chemotherapy within the preceding 2 months, must not have received prior radiation

Although some authorities in correctional, educational, and mental health have advocated stronger methods of discipline whereby strict rules are rigidly enforced by punishment procedures, history informs us this will not always work. Punishment has in many cases not been nearly as uplifting as the helping relationship which is symbolic of involvement. An over-emphasis on punishment always seems to de-emphasize rehabilitation.

It would be presumptuous to assume that the techniques of Reality Therapy have been fully implemented at the Child and Adolescent Center at Western State Hospital at this particular point in time. However, these principles are becoming more and more familiar to all staff members. The goal of rehabilitation remains the purpose of the services rendered at the Center. It is believed that knowledge of Reality Therapy has contributed greatly toward a greater efficiency on the part of the staff in working successfully in the rehabilitation of emotionally disturbed children and youth. The "no failure concept" advocated by Glasser and others has become a very important part of the educational program of the Child and Adolescent Center. Reality Therapy is not the only method of education, counseling, and therapy, but members of the staff at this Center believe that this approach has much to offer professionals of any discipline who work in rehabilitation of emotionally handicapped persons of any age.

865 Poplar Ave., Memphis, Tenn., 38104.

\* \* \*

therapy, and must not have demonstrable CNS metastasis.

Patients with Stage II disease must meet a number of rigid staging criteria. These patients must have had a nodular type cutaneous primary lesion with histologic level 4 or 5 invasion. In addition, patients over 70 years old, who have received chemotherapy within the prior 2 months, and who have received radiation therapy, are not eligible for this study.

Physicians interested in having their patients considered for admission to these studies may write or telephone:

Richard I. Fisher, M.D.  
Immunology Branch  
National Cancer Institute  
National Institutes of Health  
Building 10, Room 4B17  
Bethesda, Maryland 20014  
Telephone: (301) 496-2455



## Primary Hyperaldosteronism

### CASE PRESENTATION

A 22-year-old white female was first admitted to St. Joseph Hospital on November 27, 1967 with an uneventful term pregnancy. Her physical examination and routine laboratory studies were within normal limits, and her blood pressure was recorded at 130/90 mm/Hg. Her second admission was on April 27, 1970 when, at age 24, she had a history of hypertension for approximately two years with a blood pressure of 200/130 mm/Hg. There was no family history of hypertension, diabetes, or hypermetabolic states. She had no personal history of renal disease, hematuria, pyuria or calcuria, and there had been no evidence of edema or symptoms to suggest angina, congestive heart failure, or cardiac arrhythmia. She had had no contraceptive pills, weakness, sweats, or tachycardia. Her effort capacity was good. A systems review was negative. The physical examination showed BP 220/120 mm/Hg in both arms and legs, lying, sitting, and standing. A Grade I hypertensive retinopathy was present in the eye grounds. The heart's point of maximum impulse was in the fifth intercostal space inside the left mid-clavicular line, and the A-2 heart sound was slightly increased. The peripheral and femoral pulsations were normal. No abdominal bruit was heard. Current laboratory data showed a normal CBC, urinalysis, serology, and SMA 18/60, except that the serum potassium was low (2.4 mEq/L). Three days later, after replenishment the serum potassium was 3.4 mEq/L. The creatinine clearance was 97 ml/min. An intravenous PSP was 42% in 15 minutes. The 24 hour urine sodium excretion was 146 mEq/L. and potassium excretion 50 mEq/L. Other normal or negative studies included 17 ketosteroids, 17 hydroxy steroids, VMA and catecholamines. The patient was placed on Aldomet 500 mg/day with no appreciable change of blood pressure at the time of discharge. A high potassium intake was recommended because of the persistent low potassium during hospitalization.

On June 1, 1970, as an outpatient, BP was 130/80 mm/Hg, pulse 80/min., respiration 20/min. She had no subjective complaints. At this time the serum potassium with supplementation was 4.2 mEq/L. The Aldomet was continued. On July 1, 1970, after discontinuation of potassium, serum levels of potassium were 3.9 and 2.8 mEq/L. on successive weeks.

She was readmitted to the hospital on July 27, 1970. The heart and eye ground findings were unchanged. A complete neurological examination was within normal limits. The routine laboratory data on admission were normal with the exception of a low serum potassium of 2.8 mEq/L. Urinalysis showed Ph 5.5 and a specific gravity of 1.014. The CBC and VDRL were negative.

From the Departments of Medicine and Pathology, St. Joseph Hospital, Memphis, Tennessee 38101.

Analysis of the saliva showed a sodium of 4.0 mEq/L, potassium 118 mEq/L. and chloride 223 mEq/L. The arterial blood gasses were normal. A second 24 hour urine showed a potassium of 83 mEq/L. and chloride of 103 mEq/L. A plasma renin determined at rest and on a regular diet and was low (150 ng/dl). After five days of low sodium diet and four hours of an upright position, a plasma renin determination was quite low (120 ng/dl). A 24 hour urinary aldosterone excretion was high (54 micrograms). She was discharged March 3, 1970 to continue Aldomet and potassium supplementation.

She was readmitted on September 27, 1970 with findings similar to those described above and with a blood pressure of 190/100 mm/Hg. The SMA 18/60 was now normal. A transfemoral venogram was attempted and fluoroscopically the left renal vein was cannulated and a sizable left adrenal vein was noted. The right renal vein was never demonstrated. An aortogram demonstrated patent renal arteries. Following these studies an operation was performed. In the immediate postoperative period the hypertension was not ameliorated. It remained at 180/120 mm/Hg in both arms. A postoperative episode of paroxysmal tachycardia yielded readily to digitoxin. She was discharged on Aldomet 250 mg/day.

### CLINICAL DISCUSSION

DR. EUGENE SPIOTTA: The patient being discussed today was a young woman with hypertension and hypokalemia. Dr. James R. Givens, an endocrinologist, will discuss the case.

DR. GIVENS: It is quite unusual and alarming to obtain a blood pressure of 200/130 mm/Hg on a 24-year-old woman. Extensive but appropriate studies were carried out by her physician to delineate the cause of hypertension. The first significant feature of her hypertension is that it developed during a two year period. This historical feature of the hypertension rules out congenital deformities such as coarctation of the aorta and indicates that the etiologic factor for her hypertension was of recent development. A most significant finding was the marked hypokalemia and the continued loss of significant amounts of potassium in the urine in the presence of the hypokalemia. Furthermore, there was marked secretion of potassium in the saliva, producing an abnormally high K/Na ratio in the saliva. These findings immediately suggest the possibility of an increased production of aldosterone since this hormone causes potassium loss at the renal tubular level and in the salivary juice. Indeed, the 24-hour urinary aldosterone excretion was abnormally high (54 micrograms/24-hour). These data indicate that this woman was suffering from hyperaldosteronism and that this is likely the cause of her hypertension.



Now we must decide if the hyperaldosteronism is due to primary disease of the adrenal cortex or due to an abnormal extra-adrenal stimulatory influence. The observation that the plasma renin levels were low rules out secondary hyperaldosteronism and makes us focus on a primary adrenocortical disorder. An added point in favor of this viewpoint is the observation that the plasma renin levels did not rise as they normally do on a low sodium diet and with an erect posture. These data suggest that the hyperaldosteronism in this woman is not under the usual controlling influences for aldosterone secretion. At this point we can say that this lady has primary hyperaldosteronism.

The first entity one entertains as a cause of primary aldosteronism is an adenoma of the zona glomerulosa of the adrenal cortex which is secreting aldosterone in excessive amounts. The adenoma secretes aldosterone in an autonomous way with a corresponding suppression of plasma renin levels. The hypertension is due to the sodium retention that results from the mineralocorticoid effects of aldosterone. Against this diagnosis is the persistence of her hypertension following whatever surgical procedure was done and we must assume that if an adenoma was present it was removed. Perhaps the hypertension did disappear on longer followup than was possible during the immediate post-operative period in the hospital. This is an important point that needs clarifying since at least 85% of patients with an aldosterone secreting adenoma have a reduction in blood pressure following removal of the tumor.

Another entity associated with primary hyperaldosteronism is bilateral adrenocortical nodular hyperplasia. The pathophysiology of this condition is not well understood except it is known that there is increased aldosterone production with low plasma renin levels and frequently the blood pressure is not lowered with removal of the adrenals. Differentiation between primary aldosteronism due to a solitary adenoma and bilateral nodular adrenocortical hyperplasia can be made by measuring aldosterone blood levels in the right and left adrenal veins. In the case of a solitary adenoma the aldosterone blood level is elevated only in the adrenal vein on the side of the adenoma; whereas, in bilateral nodular hyperplasia the aldosterone blood level is elevated in both the right and left adrenal vein. Another test used to differentiate these two conditions is a suppression test using desoxycorti-

costerone (DOC). Patients with bilateral nodular adrenocortical hyperplasia have suppression of the elevated aldosterone production rate with the administration of DOC; whereas, those with a solitary adenoma do not.

In summary, the overwhelming evidence in this case favors a diagnosis of primary hyperaldosteronism. If it can be established that her hypertension was improved following the surgery, then I would vote for a diagnosis of solitary adrenocortical adenoma producing aldosterone. If her hypertension was not improved by adrenal surgery, a more likely diagnosis would be bilateral nodular adrenocortical hyperplasia.

DR. WILLIAM T. HAYES: This woman underwent a left total adrenalectomy. The adrenal weighed 9 grams and measures 18 x 28 x 65 mm. There was a bulging nodule with a retractive capsule along one surface which measured 15 mm in diameter (Fig. 1). The cut surface of this nodule was golden yellow, very much like the cortex itself. Histologic examination of this nodule showed cells indistinguishable from those of the zona fasciculata, being large and vacuolated, with the appearance of lipid content consistent with steroid production (Fig. 2). The cortex appeared normal elsewhere.

In the large classical studies such as the ones of Russi<sup>1</sup> and Conn,<sup>2</sup> adenomas are twice as common in females and twice as common in the left adrenal. Size variation is considerable and many are small. Histology of the adenomas

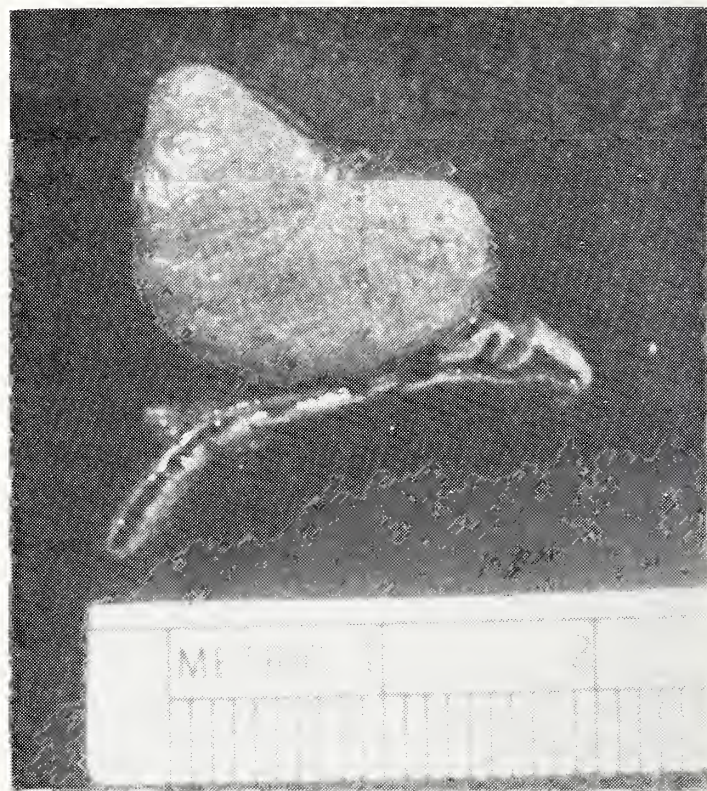


FIGURE 1. Adrenal cortical adenoma



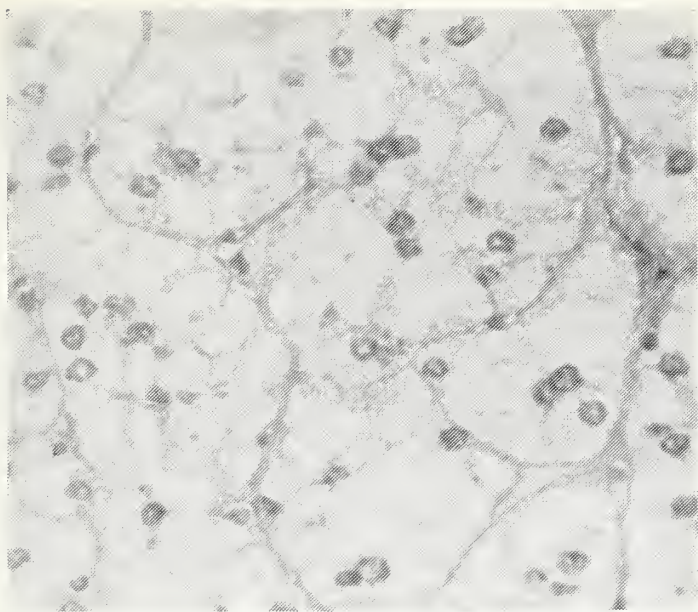


FIGURE 2. Vacuolated Cells of Adrenal Cortical Adenoma

that have been associated with aldosterone production have been similar to normal cortex, distended with lipid and indistinguishable from the zona fasciculata cells. The average diameter of the adenomas associated with primary aldosteronism in Conn's review<sup>2</sup> of 145 cases was 15 mm which is exactly the size of the tumor in this case. Those were the ones that had a primary aldosteronism. Conn<sup>3</sup> later reported that cases of essential hypertension with normokalemia tended to have smaller adenomas. It is futile to try to correlate the histology with the secretory ability because 3 mm. adenomas have been functional and 1 kilogram adenomas have not. So, as a pathologist, I cannot give the absolute answer whether this is functional. It is helpful in diagnosing an adenoma to see

bulges and capsule stretches which indicate rapid growth. When aldosteronism is suspected and the adrenals are examined, this is one of the most careful examinations the pathologist must make. The adrenals should be carefully sectioned at close intervals, studied with the hand lens, and photographed extensively. Frozen sections should be avoided because they usually do not influence the surgeons' actions and they distort the tissue. In closing I might add that most adenomas associated with aldosterone production have been single, in about 90 percent in Conn's review and slightly less in Russi's cases.

**FINAL ANATOMICAL DIAGNOSIS:** Left adrenal adenoma (aldosteronoma)

**DR. SPIOTTA:** I have a follow-up on this patient. I examined her 6 weeks after surgery and her blood pressure remained elevated without treatment. Then the blood pressure suddenly became normal and has been normal since. She has had no therapy now for two and one-half years. She has gained 8 or 10 pounds in weight and I see her every 6 months. Her potassium levels have all remained within normal limits. She has no signs of renal impairment and thus far she is cured.

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### Clinical Center Study of Patients With Multiple Basal Cell Carcinomas

The cooperation of physicians is requested in the referral of patients with multiple basal cell carcinomas for therapeutic trials being conducted by the National Cancer Institute's Dermatology Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Of interest are patients with approximately a dozen or more basal cell carcinomas, including patients with the basal cell nevus syndrome.

Upon completion of their studies patients will be returned to the care of the referring physician who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may call collect or write to:

William R. Levis, M.D.  
Clinical Center, Room 10N-254  
National Institutes of Health  
Bethesda, Maryland 20014  
Telephone: (301) 496-2481



## Interpretation of Serum Iron Studies

At our institution, undoubtedly the most common type of anemia encountered is related to blood loss with iron deficiency; therefore, one of the most helpful studies routinely performed during the anemia workup is that of the serum iron and total iron-binding capacity (TIBC). However, there are certain pitfalls in the interpretation of the resultant values from these studies which must be considered for proper evaluation.

In the normal person, the average daily intake of iron is 10-20 mg, of which roughly 10% is absorbed. Iron circulates in the blood plasma bound to the B-1 globulin transferrin and has a relatively short half-life of approximately 60-120 minutes (compared to 9-10 days for transferrin). In tissues, this iron is by some mechanism given up to the reticuloendothelial (RE) cells for storage as ferritin or hemosiderin; in the marrow it is also transferred directly to erythrocytic precursor cells for hemoglobin synthesis. The RE cell storage iron is also utilized in the marrow for erythropoiesis. Thus, all these interacting factors play a role in determining the serum iron level.

At birth circulating iron levels are about twice the normal adult level, but fall precipitously, with a gradual rise over the next few weeks. Adult levels are reached sometime before or around puberty, with males attaining slightly higher levels than females (mean difference approximately 15  $\mu\text{g}/100\text{ ml}$ ). With advancing age there is a decrease in serum iron values, the mean levels for individuals over 70 being in the low-normal end of the usually-stated normal range of approximately 75-175  $\mu\text{g}/100\text{ ml}$ .

Of particular importance in evaluation of serum iron is the fact that there is a marked diurnal variation, with morning values as much as 30  $\mu\text{g}/100\text{ ml}$  or more higher than evening values. However, the TIBC does not change, which may result in a significant fluctuation in both the absolute serum iron value and in the percent saturation. (Morning specimens are thus recommended for serum iron studies.) Similarly,

day-to-day variation of serum iron may approach 30% for both men and women; there is no apparent seasonal variation. Low serum iron levels have been described in obese but otherwise normal adolescents.

Decreased serum iron levels may be due basically to one of two mechanisms: simple total body iron deficiency, or impaired release of RE storage iron into the plasma (as seen in malignancy, chronic disease states such as collagen diseases and renal disease, and acute infections). Increased serum iron levels may reflect increased release from erythrocytes (hemolysis, either intravascular, extravascular, or intramedullary), increased liberation of storage iron (acute hepatocellular necrosis as occurs with hepatitis), impaired hemoglobin synthesis with accumulation of storage iron (sideroachrestic and hypoplastic anemias, lead poisoning), or in increased total body iron levels (hemochromatosis). Increases in the TIBC (increased transferrin levels) may be seen in pregnancy, oral contraceptive administration, and iron deficiency anemia; decreases are seen whenever there is deficiency, decreased synthesis or loss of protein (malnutrition, malignancy, chronic illness, hepatic disease, nephrosis).

The detection of early iron deficiency by simple morphological inspection of the peripheral blood smear is often not possible when the effects on the erythron as reflected by values for hemoglobin, hematocrit, RBC count, and indices, are mild or perhaps even moderate. Conversely, perhaps due to artifacts in technique, occasional normal blood smears will appear hypochromic and microcytic. Thus except in the well-developed case of iron deficiency anemia, evaluation of the blood smear may be misleading, and proper diagnosis may depend on historical factors, serum iron and iron-binding capacity values, or ultimately even evaluation of marrow iron stores.

To further complicate matters, occasional recent reports have appeared in the medical literature describing "megaloblastoid" bone marrow changes, mimicking those seen in vitamin B<sub>12</sub> and folic acid deficiency anemias, in patients

From the Department of Pathology, Methodist Hospital, Memphis, Tenn., 38104.

*continued on page 942*



## HISTORY

This 62-year-old gentleman underwent replacement

of his aortic valve with a Starr-Edwards prosthesis two days ago because of worsening congestive heart failure following a long history of rheumatic heart disease with predominant aortic regurgitation. A routine left atrial pacing wire was placed during surgery and was subsequently attached to a demand generator. His postoperative electrocardiogram (Fig. 1) presented a somewhat confusing sequence of pacemaker artifacts, P waves and QRS complexes.

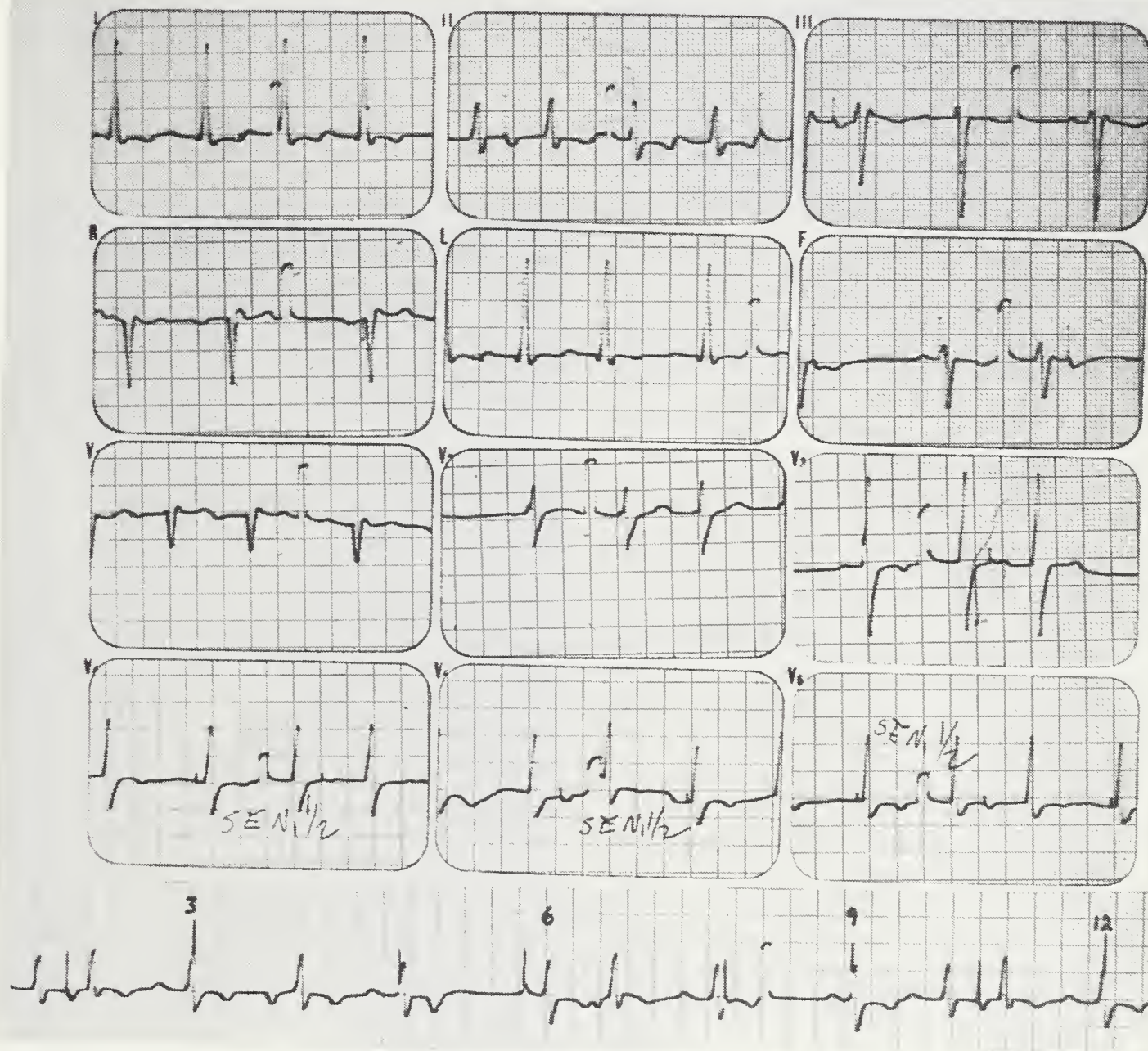


FIG. 1

## DISCUSSION

Although the postoperative arrhythmia was creating no immediate hemodynamic problems, a decision regarding prophylactic antiarrhythmic therapy seemed in order. The 12 lead ECG documents left ventricular enlargement with nonspecific ST-T changes. In the rhythm strip, cycles terminated by QRS numbers 3, 5, 8 and

12 are similar and are assumed to represent the underlying basic normal sinus rhythm. The pacemaker artifacts fall at random indicating sporadic, unpredictable pacemaker suppression and if any control of atrial activity is exercised, it is before QRS numbers 2 and 11. P waves preceding QRS numbers 4, 7 and 10 are premature and of altered contour suggesting premature atrial contractions.

Nonconducted premature P waves are sus-

From the Department of Cardiology, St. Thomas Hospital, Nashville, Tenn., 37203.



pected in the T waves following QRS numbers 5 and 8 as the cause of these two prolonged cycles.

Turning off the pacemaker generator simplified the situation and an easily recognizable normal sinus rhythm with multiform conducted and nonconducted premature atrial contractions became evident. The arrhythmia resolved on maintenance doses of digitalis and quinidine

during the ensuing few days and created no clinical problem.

Final ECG diagnosis:

1. Malfunctioning demand atrial pacemaker.
2. Multiform conducted and nonconducted premature atrial contractions.

HARRY L. PAGE, JR., M.D.  
W. BARTON CAMPBELL, M.D.  
*Co-Directors*

\* \* \*

### Laboratory Medicine

*continued from page 940*

who were simply iron depleted. Serum iron and TIBC values were typical, and the changes reversed with oral iron therapy. These cases are rare, but serve to emphasize the fact that the

regulation of serum iron and iron-binding capacity values, and the morphological effects of iron deficiency, involve a rather complicated series of physiological and pathological mechanisms.

DEAN G. TAYLOR, M.D.

\* \* \*

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A 69-year-old female was well until three years prior to admission when she noted shoulder pain. She was treated with Butazolidin with no effect. Subsequently, she developed a pancytopenia. Bone marrow examination at that time showed marrow depression and presence of some atypical cells in the marrow. Her pancytopenia persisted and she developed, in addition, tiredness, weakness, neck pain and paresthesia in left upper extremity. On physical examination, she appeared pallid. An ejection murmur was heard over the heart. She was noted to have decreased sensation



FIG. 1

From the Department of Radiology, Vanderbilt University Hospital, Nashville, Tenn. 37232.

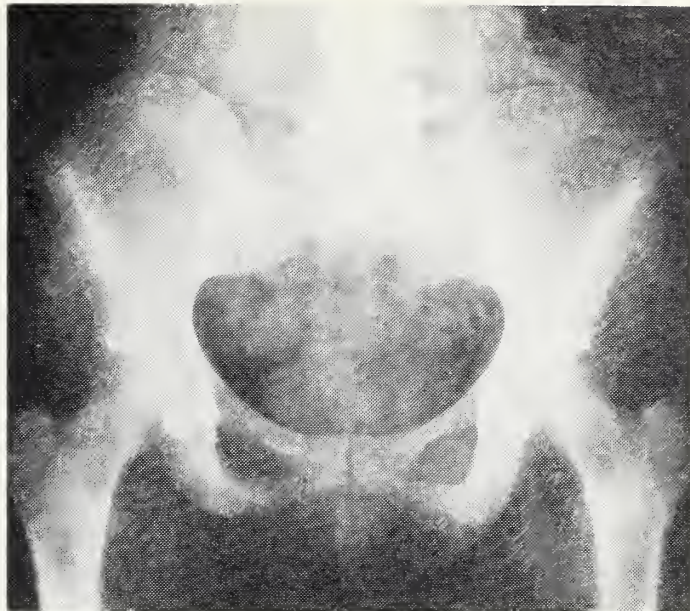


FIG. 2

over the inner aspect of the left forearm and hand. There was no peripheral adenopathy or hepatosplenomegaly. X-rays of her lumbar spine and pelvis are shown in Figure 1 and Figure 2.

**Clinical Data:** On admission, her clinical laboratory tests showed RBC  $1.65 \times 10^6$ , hemoglobin 4.5 g/100 ml., PCV 14.5%, reticulocytes 0.4%, MCV 87, MCH 28, MCHC 31, platelets 16,000/cmm., WBC 750 with juvenile cells 10, segments 20, lymphocytes 63, atypical lymphocytes 4.0, monocytes 3.0. Serum electrophoresis showed a normal pattern. Bence-Jones protein was negative. Serum calcium 8.5 mg.%, inorganic phosphate 3.4 mg.%, total bilirubin 0.4 mg.%, albumin 3.8 gm.%, total protein 5.6 gm.%, uric acid 6.5 mg.%, BUN 21 mg.%, glucose 130 mg.%, LDH 150 I.m.U./L, alkaline phosphatase 11 K-A units (normal 4-17), SGOT 25 units.

**X-Ray Findings:** Radiographs of her lumbar spine (Fig. 1) and pelvis (Fig. 2) show diffuse increase in density with multiple osteoblastic lesions and interspersed lytic areas. Additional X-rays of her skull, mandible, cervical spine, ribs and long bones demonstrated widespread mixed lytic and blastic foci. Differential diagnoses based on radiological findings include<sup>3</sup>: 1 Metastatic carcinomas to the bones, especially from the breast; carcinoma of the gastrointestinal tract, especially pancreatic carcinoma and gastric carcinoma; other malignant tumors from the lungs, kidney, thyroid; Hodgkin's disease; leukemia. 2. Fungal infection, especially actinomycosis and blastomycosis. 3. Mastocytosis. 4. Systemic angiomatosis.<sup>1</sup> 5. Multiple myeloma, sclerosing type. Other causes of dense bones may include osteopetrosis, osteopoikilosis, flurosis, and tuberous sclerosis. However, because of her persistent pancytopenia and neurological signs the most likely possibilities are that



of myeloproliferative disease, including lymphomas and leukemia, and multiple myeloma.

**Course in Hospital:** Prior to admission, because of the presence of atypical cells in bone marrow, a tentative diagnosis of multiple myeloma was made and she received treatments with Alkeran, Cytosan, and Vincristine. Her symptoms and pancytopenia showed no improvement. She received a total of about 35 units of blood in a period of 1½ years. She also received radiation therapy to the lumbosacral spine with 3,000 R in ten days. Following admission, a repeat bone marrow aspiration revealed that the marrow space was occupied by a fairly uniform growth of small plasma cells. Occasional multinucleated and dysplastic plasma cells were also noted. No metastatic carcinoma was seen. The pathological diagnosis was multiple myeloma. A note was made that the bony trabeculae in the biopsy specimen were definitely thickened, which could be compatible with radiological appearance of osteosclerosis.

**Final Diagnosis:** Osteosclerotic multiple myeloma.

#### DISCUSSION:

Bone sclerosis in multiple myeloma is rare and not often mentioned in radiologic literature.<sup>4,5</sup> Lowbeer<sup>7</sup> reviewed literature from 1933 to 1967 and found 56 well documented cases of blastic multiple myeloma. An additional 30 cases of blastic reaction were found subsequent to fracture or some form of treatment<sup>3</sup> (radiation, fluoride, urethane, or steroid therapy), or deposition of amyloid.<sup>6</sup> Osteosclerotic myeloma is found in about 3% of all cases of myeloma.<sup>7</sup> Similar to classic myeloma, the age of these patients ranged from 10 to 74 years, electrophoresis pattern being much the same with elevation of globulin fraction in 90%, and elevated gamma globulin fraction in 50%,

\* \* \*

#### "Chloroform Party" is Latest Drug Abuse Fad

CHICAGO—The newest wrinkle in drug abuse among the young is the "chloroform party," says a report in *JAMA*.

Young adults in central Wisconsin recently have been participating in chloroform parties, where a bottle of chloroform is passed around and each participant inhales the vapors from a saturated cloth, says William W. Storms, M.D., of the University of Wisconsin Medical Center.

The "high" is short-lived and does not leave any tell-tale signs. Some participants drink small

positive Bence-Jones protein in 50%, and normal alkaline phosphatase in 95% of cases.<sup>2</sup> Serum calcium and phosphate levels are also similar and usually normal. Hypocalcemia has been reported. However, in contrast to a male predominance (80%) in classic myeloma, osteosclerotic myeloma has about equal sex incidence. Although most patients are anemic, erythrocytosis is 3 to 4 times more frequent than in classic myeloma. Peripheral neuropathy occurs more frequently in osteosclerotic myeloma, having an incidence of 30 to 35%. Peripheral neuropathy is noted to occur more commonly in myeloma patients with erythrocytosis. Our patient presented signs and symptoms of peripheral neuropathy without erythrocytosis. The other uncommon aspect of this patient is persistently normal electrophoresis. It has been estimated that approximately 1% of patients with multiple myeloma never have abnormal proteins.<sup>2</sup>

JANET HUTCHESON, M.D.

YING T. LEE, M.D.

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amounts of chloroform in addition to inhaling it. They claim no ill effect, Dr. Storms reports.

The report describes the case of a 19-year-old boy who drank a quantity of chloroform on top of three bottles of beer and wound up in the hospital, seriously ill. He recovered, but suffered liver damage.

Drinking chloroform can cause coma, severe liver damage and even death, says Dr. Storms. Physicians and public health authorities should be aware that chloroform sniffing is a new fad, and young people should be informed of its potentially lethal consequences, he writes.



# PERICARDIAL EFFUSION

An enlarged cardiac silhouette on a chest X-ray together with the signs and symptoms of congestive heart failure constitute a common medical problem. The physician must determine whether the silhouette is large because the heart is large or because there is excess fluid between the heart and the pericardium. This problem can usually be solved by a combination of isotope angiography of the heart and echocardiography.

A young adult male with a known mediastinal malignancy received external irradiation to the chest. Subsequently, his cardiac silhouette appeared progressively larger on chest X-rays over a four month period. During this time, clinical signs of heart failure slowly developed. A heart

second photographs were obtained over the heart. A gamma camera and 15,000 hole diverging collimator were used. Then, with the patient in the same position, static photographs were obtained, accumulating 400,000 counts. Following this procedure, an echocardiogram was done (Hoffrel Ultrasound Instruments) to visualize the structure and motion of several parts of the heart. The isotope study took five minutes and the echocardiogram took thirty minutes.

The isotope cardioangiogram on the patient (Figure 1A) demonstrates a persistent large space between the left lung and heart and the right lung and heart throughout the first circulation through the heart and lungs. The separation of heart from both lungs and the diaphragm is also seen on the static (2 minute) picture.

## ISOTOPE CARDIOANGIOGRAPHY

Pericardial Effusion

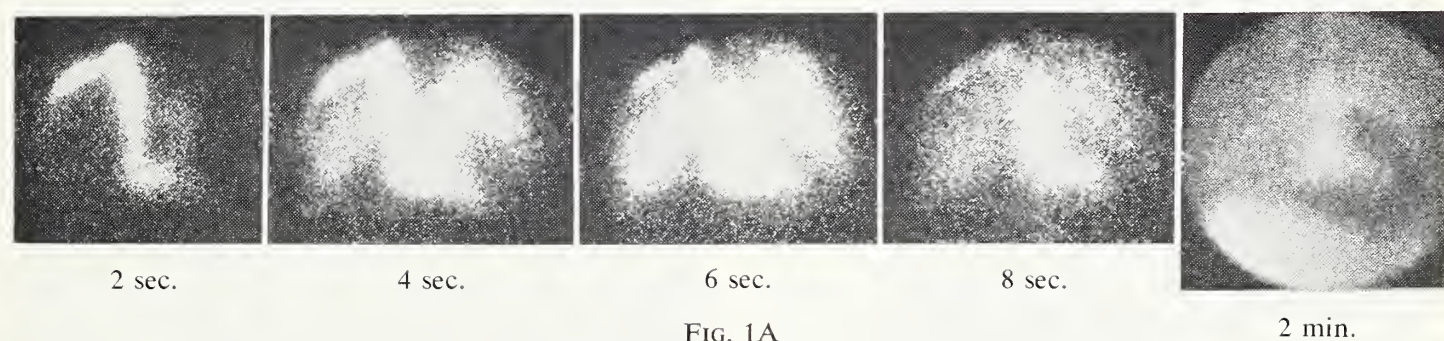


FIG. 1A

Normal

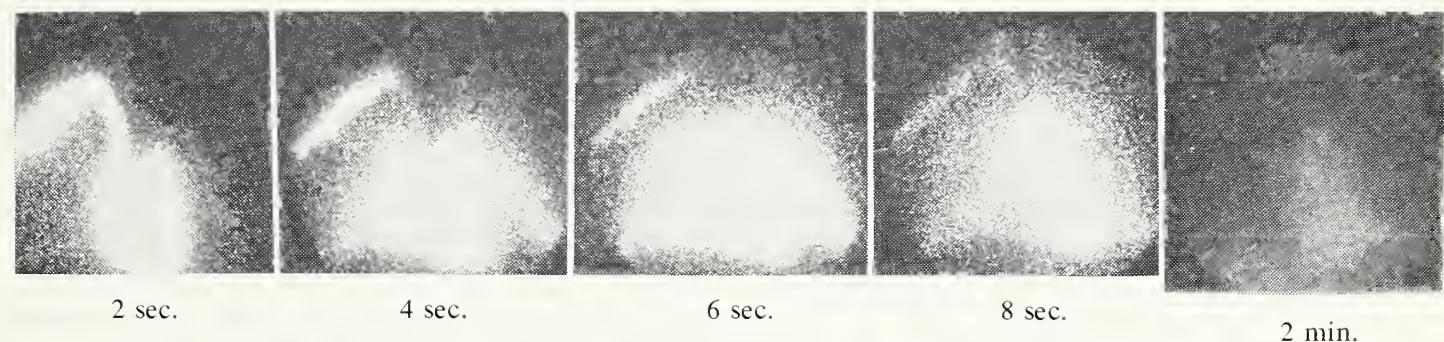


FIG. 1B

study with isotope angiography and an echocardiogram were performed. Ten millicuries of technetium 99-m pertechnetate were injected as a bolus into an antecubital vein and serial two

From the Department of Nuclear Medicine, Park View Hospital, Nashville, Tenn., 37203.

Circulation time is normal (i.e. isotope enters the descending aorta by eight seconds post injection) and the ventricles are not enlarged. A comparable study on a normal patient (Figure 1B) shows no separation of the heart from the lungs or diaphragm. Again, ventricular chamber



size and circulation times are normal. The persistent non-radioactive zone between the heart and surrounding structures is the sine qua non for the diagnosis of pericardial effusion by isotope cardioangiography. If the effusion is very large (over 500 ml), an indentation of the superior vena cava as it enters the right heart would be a common finding. The normal circulation time and chamber size are findings that militate strongly against the diagnosis of cardiomegaly due to cardiomyopathy.

The echocardiogram on the patient (Figure 2A) demonstrates a clear space between the

when there is a large effusion.)

Although the heart study combining isotope cardioangiography and echocardiography can differentiate pericardial effusion from cardiomegaly, the cause of the effusion (e.g. uremia, tuberculosis, bacterial or viral infection, tumor, radiation) or the cause of the cardiomegaly (e.g. myxedema, mitral valve disease, aortic valve disease, or bacterial or viral myocardopathy) is not established. However, the additional information that these combined studies provide about circulation time, shunts, mitral valve action, cardiac output, systolic and diastolic

#### ECHOCARDIOGRAPHY

##### Pericardial Effusion

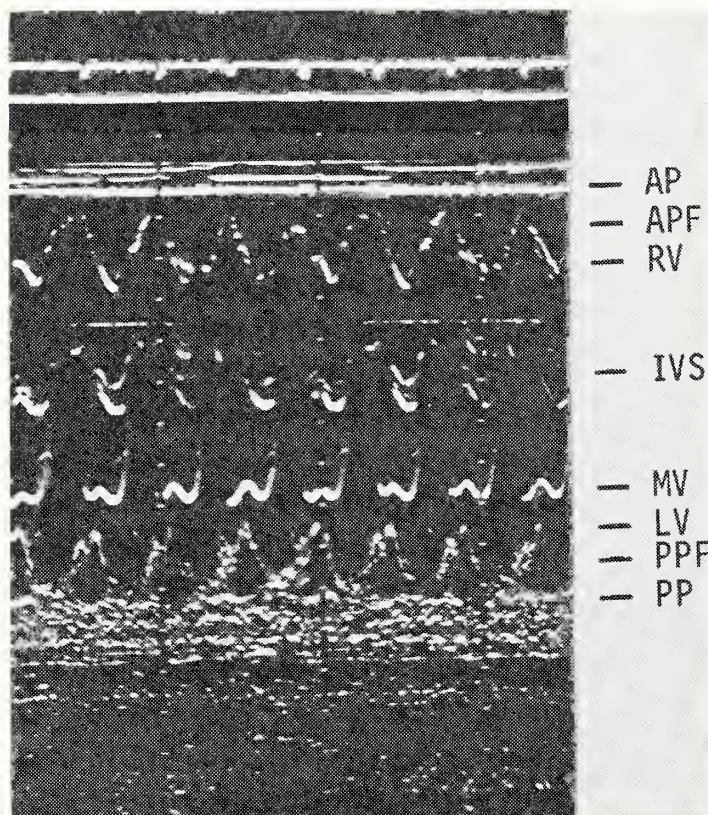


FIG. 2A: AP Anterior pericardium, APF anterior pericardial fluid, RV right ventricle, IVS interventricular septum, MV mitral valve, LV left ventricle, PPF posterior pericardial fluid, PP posterior pericardium.

pericardium and the posterior left ventricular wall and the right anterior pericardium and the right ventricular wall. The fact that the anterior right ventricular wall and posterior left ventricular wall are both in systole at the same time suggests that the perfusion is not massive. The echocardiogram on the normal individual (Figure 2B) shows no separation of the posterior left ventricular wall from the pericardium. The anterior wall and anterior pericardium are not well delineated. (This delineation is seen best

#### ECHOCARDIOGRAPHY

##### Normal

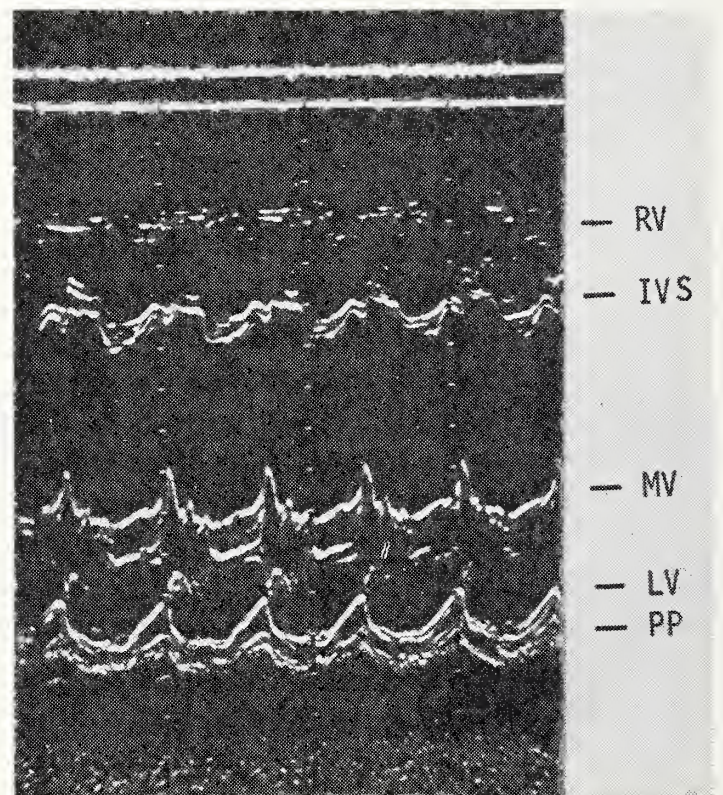


FIG. 2B: RV right ventricle, IVS Interventricular septum, MV mitral valve, LV left ventricle, PP Posterior pericardium.

volumes, ejection fractions, and atrial size, further delineates the problem and should lead to a more rational therapeutic approach. Furthermore, these combined tests provide the maximum amount of information while inflicting the least trauma and expense upon the patient.

ROBERT L. BELL, M.D., Director

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## CLINICAL SIGNIFICANCE OF PLASMA RENIN ACTIVITY

Plasma renin activity has recently been recognized as an important diagnostic tool in the evaluation of hypertensive patients and may provide an important clue to specific and rational therapy in hypertensive patients.

Renin is an enzyme produced by the kidney in response to any condition which lowers the effective plasma volume. Diuresis, upright posture, low salt intake, hemorrhage or decreased renal perfusion (as in renal artery stenosis) will result in increased renin production. Conversely, conditions which expand the plasma volume suppress renin production. Thus, conditions such as high salt intake, supine posture and ingestion of sodium retaining steroids will result in lowered renin production.

Renin acts on a plasma protein produced by the liver called angiotensinogen (renin substrate) enzymatically converting it to angiotensin I. Angiotensin I is then enzymatically converted during a single pass through the pulmonary circulation to form angiotensin II. Angiotensin II is the active hormone which stimulates the adrenal gland to produce aldosterone, a potent mineralocorticoid which causes sodium retention, expansion of the plasma volume and potassium loss.

The term plasma renin activity (PRA) refers to the ability of the renin present in a sample of plasma to convert the renin substrate present in that plasma to angiotensin I during a controlled 3-hour incubation in the laboratory. The angiotensin I generated is measured by radioimmunoassay and the result expressed in nanogram per milliliter per 1-hour incubation (ng/ml/hr).

PRA varies considerably with the salt content of the diet, posture and state of hydration; hence these factors should be considered in interpreting renin results. Certain drugs inhibit renin release (propranolol) while others increase plasma renin activity (diuretics, estrogens and oral contraceptives).

The conditions in which peripheral vein PRA

determination is particularly valuable are as follows: primary aldosteronism, licorice intoxication, pseudoaldosteronism, and low renin essential hypertension.

*Primary Aldosteronism.* The findings of hypertension and hypokalemia suggest the possibility of a tumor of the adrenal gland autonomously producing excessive amounts of aldosterone. This condition, however, must be differentiated from a variety of other conditions in which hypertension, hypokalemia and aldosterone excess are found as a physiological response to a lowered effective plasma volume. In primary aldosteronism the autonomous overproduction of aldosterone results in excessive sodium retention and expansion of the plasma volume which in turn causes renin production to be quite low. In the other forms of aldosterone excess a diminished effective plasma volume has resulted in an increased renin production by the kidney, resulting in the increased aldosterone production. Hence, the findings of a low PRA in a hypertensive, hypokalemic patient should strongly suggest primary aldosteronism which is then confirmed by an elevated urinary aldosterone excretion.

*Pseudoaldosteronism.* A small group of families has been described in whom hypertension and hypokalemia exist along with low PRA. These patients do not have primary aldosteronism because the aldosterone excretion rate is quite low. A renal tubular abnormality has been demonstrated in these patients resulting in excessive sodium retention and potassium loss with expansion of the plasma volume resulting in decreased renin and aldosterone production. This disorder is treated with triamterene which results in correction of the hypertension and the hypokalemia.

*Licorice Intoxication.* In screening hypertensive patients for the curable causes of hypertension it is always desirable to ascertain if licorice is used to excess. Licorice extract is used as a flavoring in many candies, soft drinks and artificially sweetened foods and contains a mineralocorticoid-like substance, ammonium glycyrrhizinate, which causes sodium retention, potassium loss and expansion of the plasma vol-

From the Hypertension Center, Vanderbilt University School of Medicine, Nashville, Tenn. 37232.



ume. This in turn results in low PRA and hence low aldosterone production. This syndrome is recognized by careful history taking and treated by discontinuing licorice ingestion.

**Low Renin Hypertension.** Twenty percent of patients with "essential" hypertension have PRA's which resist acute stimulation. In this respect they resemble patients with primary aldosteronism but they differ from those patients in that their serum potassium and urinary aldosterone excretion are normal. These patients have been found to respond with normalization of blood pressure to the mineralocorticoid antagonist, spironolactone, in doses from 100 to 400 mg per/day. They also appear to respond to other equally potent diuretic agents. They may be separated from patients with normal renin essential hypertension by a simple outpatient Lasix stimulation test. All antihypertensive medications are discontinued for two weeks. Lasix (40) mg is administered orally at 6 p.m., 12 mn and 6 a.m. The patient assumes the upright posture for 3 hours and a PRA is obtained. Care should be exercised in administering this test to patients with known renal disease, coronary artery disease or cerebrovascular insufficiency. If the PRA is less than 1.5 ng/ml/hr, 80% of patients will respond to high dose diuretic therapy with normalization of the blood pressure.

PRA may also be determined from each renal vein in those patients with suspected renal origin hypertension, such as renal artery stenosis, unilateral hydronephrosis, unilateral small kidney, renal infarction and renin secreting tumor. The finding of a renal vein renin ratio of 1.5/1 (affected side/non-affected side) is indicative of functionally significant renal origin disease. A high degree of success in obtaining surgical cure of hypertension has been seen in patients with renal artery stenosis with significant lateralization of the renins. Data from several sources suggests that this is also true for other forms of renal origin hypertension.

Thus, plasma renin activity of both peripheral blood and renal vein blood may be a valuable adjunct in the recognition of many curable forms of hypertension and may serve as a guide to specific and rational therapy.

JOHN W. HOLLIFIELD, M.D.  
Instructor, Department of Medicine

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**from the  
executive  
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**J. E. BALLENTINE**

# **MEDICAL DIGEST**

**NEWS OF INTEREST TO DOCTORS IN TENNESSEE**

**RECOMMENDATION FOR STATEWIDE PSRO'S . . .** The National Professional Standards Review Council voted to recommend to HEW that the option to establish statewide PSRO's be considered regardless of a state's physician population . . . This action also supports a statewide organizational option for any qualified physician group, and has also proposed that county or multi-county peer review groups be given the option to be considered separately from statewide PSRO's. The National Professional Standards Review Council has recommended that "where the professional associations concerned demonstrated a desire and capability of successfully sponsoring a state-level PSRO, the option of an essentially statewide area designation should be considered even though the 2,500 physician general limit is exceeded," and that "area designation considerations within a state recognize that appropriate geographical sub-limits within the state with the capability to develop a PSRO which meets the law and regulatory requirements can seek, and be expected to obtain HEW area designation." . . . The National Professional Standards Review Council's recommendations are not binding on HEW.

\* \* \*

**WHAT IS PSRO INTENDED TO ACCOMPLISH? . . .** Boiled down, the PSRO will create a national network of local physician groups to review the necessity, quality and appropriateness of institutional care provided under the Social Security Act . . . It will make determinations as to the medical need for care and assure the quality if care rendered meets professionally recognized standards . . . PSRO's will be organizations of most of the physicians practicing in a geographic area. If the physicians are assigned responsibility for reviewing hospital care, the law says they must have active staff privileges in at least one of the PSRO area participating hospitals. Norms of care will be developed locally by physicians. They will judge where a colleague has met the locally established criteria.

\* \* \*

**PHASE III RULES STILL GOVERN MD'S. . . .** For the "health care industry," Phase IV Wage and Price Controls will be administered under the same rules as Phase III . . . The Health Advisory Committee of the Cost of Living Council may offer some changes in the rules which might be effective October 1, but this is speculation only . . . For physicians, Phase IV will allow price increase of 2.5 per cent yearly, only if there has been a corresponding cost increase. Phase III was essentially the same as Phase II for health care providers with the exception that price posting requirements were lifted . . . There is nothing at present to indicate when Phase IV controls will be lifted. . . The Cost of Living Council said it will consider revisions in the controls for physicians, dentists, and other non-institutional care.

\* \* \*



**PHYSICIAN'S PATIENT MEDICAL RECORDS . . .** Photographing physician's patient medical records by insurance companies, their agents, employees, investigative organizations and other third parties, is reported to be a growing practice in some areas. To determine the extent of the practice, AMA's Committee on Private Practice has sent a questionnaire to county and metropolitan medical societies asking whether it is common, rare, or non-existent in their areas. The questionnaire states that while the practice is a convenient way to obtain information, it simultaneously "permits access to substantially greater amounts of information than is necessary or is intended through the release authorized by the patient."

\* \* \*

**KEOUGH PENSION LEGISLATION MOVES AHEAD . . .** Becoming members of professional corporations "essentially, in most respects, self-employed," the Senate Finance Committee said its proposed changes in the Keough Plan are designed to correct a system that "discriminates in favor of those who choose to incorporate and against those who do business in the more traditional partnership form" . . . The Committee voted to liberalize the Keough Plan for self-employed people, and to place restrictions on retirement savings by professional corporations . . . The bill would increase the maximum deductible contribution of self-employed persons to the lesser of \$7,500 or 15 per cent of earned income. It places a \$100,000 ceiling on the earned income rate base . . . In its report on the proposed bill, the Committee said, "It is clear that the formation of professional corporations, a practice which has proliferated enormously in recent years, has had the effect of circumventing the limitations which Congress intended" to impose on deductible contributions by the self-employed.

\* \* \*

**BETTER INSURANCE SERVICE TO PHYSICIANS . . .** The Blue Cross-Blue Shield of Tennessee claims a better service will be rendered to physicians as a result of a newer identification card for a subscriber that will simplify claim filing for physicians . . . The BC-BS identification card has been revised to provide a description of the benefits a subscriber is entitled to receive. The card will provide a section with an explanation of the subscriber's coverage in narrative form. It is stated that this will aid the physician's staff in interpreting what is covered by Blue Cross-Blue Shield, and should reduce the expense of the problems of filing claims for not covered services, help the physician's office file for accurate claims, and make payments faster with less confusion . . . A letter describing the change in the card along with the new code sheet that interprets the information is being sent to every Tennessee physician served by Blue Cross-Blue Shield of Tennessee.

\* \* \*

**PLAN TO ELIMINATE MEDICAL DEDUCTIONS FROM INCOME TAX . . .**

The September 10 issue of Medical News Report states that "HEW officials said they have submitted a plan to eliminate medical deductions from income taxes to the Treasury Department and White House." There was no indication either has reacted . . . Officials said proposal was under study because "National Health Insurance will not be free--somewhere in system someone is going to have to pay for it." The plan has been circulated in HEW and submitted also to Senator Edward Kennedy, author of the legislation, for full scale socialized medicine.



**public  
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## **COMMUNICATIONS • LEGISLATION**

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**REGIONAL PSRO CONFERENCE HELD IN ATLANTA . . .** The AMA conducted a 1½ day meeting in Atlanta September 14-15 concerning Professional Standards Review Organizations. The conference was one of eight such meetings scheduled across the nation and was attended by 17 Tennessee physicians and medical society executives. The latest information regarding the new PSRO law was presented. Representing the Tennessee Foundation for Medical Care were Drs. J. Kelley Avery of Union City, Thomas K. Ballard of Jackson and Olin O. Williams of Murfreesboro. Others in attendance included Drs. E. Kent Carter of Kingsport, R. L. DeSaussure of Memphis, John H. Saffold and Mark Fecher of Knoxville, John L. Farringer, Jr. of Nashville and Durwood L. Kirk of Chattanooga. Medical Society executives in attendance were Flo Richardson of Chattanooga, Polly Shoemaker of Knoxville and J. E. Ballentine and Hadley Williams of the TMA staff. Drs. H. C. Haynie, N. J. Carrozzo and Mr. James H. Littlejohn of the Tennessee Department of Public Health, along with Dr. William D. Tribble of the Mid-South Regional Medical Program also attended.

\* \* \* \* \*

**LIABILITY INSURANCE AVAILABLE FOR PHYSICIAN'S ASSISTANTS . . .** Shelby Mutual Insurance Company, underwriter for TMA's group malpractice insurance coverage, has issued rules and requirements for insuring a Physician's Assistant. Three guidelines establishing minimum requirements relative to a Physician Assistant's training must be met. They are:

1. The Physician's Assistant must have successfully completed an educational training program of at least two academic years, sponsored by a college or university and that such training program did include clinical work.
2. A resume of the complete educational and training experience of the applicant must be submitted.
3. The employing physician must submit a job description outlining the way the Physician's Assistant is to be used.

A Physician's Assistant also be required to successfully pass the national examination, now being prepared by AMA, to certify Assistants. If all of the above conditions and requirements are met, Shelby Mutual will provide coverage for the doctor's responsibility as employer of the Physician's Assistant and will issue separate individual policies for the Physician's Assistant himself. The company also announced that in those instances where a Physician's Assistant does not meet the above requirements, coverage for the employing physician will be terminated.

\* \* \* \* \*



**TMA CO-SPONSORS WORKSHOP . . .** The Tennessee Medical Association, Tennessee Hospital Association and Tennessee Medical Record Association will jointly sponsor a Medical Audit Workshop, November 15 and 16 at the Hilton-Airport Inn in Nashville. As a follow-up of the JCAH Trustee-Administrator-Physician (TAP) program, this seminar is designed to present practical, concentrated instruction on the "how to do it" of the JCAH Respective Patient Care Audit Procedure. Physicians desiring to attend may obtain registration forms and arrangement details from their local Hospital Administrators or by contacting the Tennessee Hospital Association in Nashville. Hotel reservations may be made by calling toll free 800-336-3811.

\* \* \* \* \*

**HEALTH PROJECT CONTEST IN PROGRESS . . .** The 21st annual Health Project Contest sponsored by the TMA and the Woman's Auxiliary to the TMA is now in progress. Some 350 junior and senior high schools across the State have been contacted and encouraged to participate in the contest. The contest, in years past, has proven to be a worthwhile educational experience in that it provides students with an opportunity to gain an insight and a deeper appreciation as to the values of good health. With many of the most serious problems facing today's youth being directly related to their health, the TMA encourages its members to not only support this annual effort, but to be a part of it. Details about the contest can be obtained from the TMA office or from any county Woman's Auxiliary Health Project Contest Chairman.

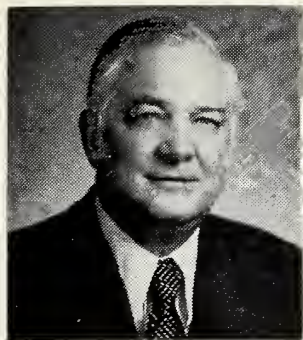
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**TV HEALTH SERIES TO BE AIRED IN NOVEMBER . . .** A series of five special medical documentaries is to be aired over 237 Public Broadcasting Service stations beginning November 19 and continuing through March 1974. These 90-minute programs, titled "The Killers," are designed to inform the public about methods of prevention, early detection and treatment of the five medical conditions that took 1.5 million lives and accounted for 75.7% of the deaths in the United States last year. Included in the series will be discussion of heart disease, inborn genetic defects, pulmonary disease, trauma and cancer. The series will be viewed locally in Tennessee over four PBS stations and is designed as a springboard for community educational activities regarding each disease. Many local physicians will be asked to participate in these follow-up activities such as lectures, workshops, demonstrations and informal clinics.

\* \* \* \* \*

**TENNESSEE MEDICAL ASSISTANTS CERTIFIED . . .** A record number of 356 medical assistants have become Certified Medical Assistants (CMA's) by successfully passing the 1973 Certification Examination conducted by the American Association of Medical Assistants (AAMA). Of this number, five are Tennesseans. They are: Martha Clausel of Memphis, Virginia Davis of Chattanooga, Rachel Younger of Nashville and Charlene Larimer and Linda Stewart, both of Johnson City. AAMA inaugurated the certification program in 1963 as part of its goal to improve professional standards and education in the field.





MORSE KOCHTITZKY

## president's page

It has been my privilege to meet with several of our county medical societies since I assumed the office of President last April. These gracious invitations, I must confess, have not been entirely voluntary but were solicited by me because it is the intent of your President this year to determine what you desire from your state medical association, what you expect from your dues, and where the Association can be of greater service to you. From these meetings, I have found there is a growing concern over government intervention, ethics, unlicensed physicians, PSRO's and a plethora of other problems facing physicians individually and the profession as a whole.

The intervention of government in health care has certainly had the greatest impact of anything else on the practicing physician. There are controls on what a physician can do relative to increasing his fees; the mammoth program not yet stated as to what physicians are going to be involved with in Professional Standards Review; liability and malpractice, medical education, and numerous other obstacles and problems that require the time of a physician who is already extremely busy. However, he has to meet those requirements that are thrust upon him.

Before a number of societies, I have had indepth discussion and exchange of ideas on PSRO, and your Association is trying its best through the Tennessee Foundation for Medical Care, Inc., to impart PSRO information as we obtain it for the edification of physicians. Your officers, committees, the Foundation, and your TMA staff are all working diligently to come up with suggestions to alleviate as many of these problems as possible. I would hope that every physician in Tennessee would review the June issue of the TMA JOURNAL. The amendments, resolutions and reports submitted and adopted are the issues that your elected officers are attempting to resolve.

It is my opinion that the contents of the law which mandates Professional Standards Review Organizations, are extensive and far reaching, and cover areas relating to the integrity of the profession. It is one of the most profound laws that has ever been thrust upon us. This program relating to review of patient care is the most significant legislative directive since the original Medicare/Medicaid legislation. Guised under the phrase of quality, it is in reality a cost control mechanism effecting our ability to exercise independent medical judgment for the patient's benefit.

Fully recognizing the inherent dangers of medical standard setting by the government, the new emerging bureaucracy, increased "health-care" costs generated from HEW, and more usage of physicians' time for government paper work, the medical association is committed to cooperation and implementation—but not regulation. We must be watchful of the phrase "In accordance with the regulations of the Secretary."

Each member of our great state association must become aware of his personal responsibility as this law relates to medical practice. Rules and regulations that will be forthcoming apply to all physicians. We must not abdicate our role as leaders in this area.

Sincerely,

President



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OCTOBER, 1973

# editorials

## AND STILL MORE PSRO

*The time for slow and steady accretions of programs in quality maintenance is past. Now the health care professions are on short notice . . . from the public and its representative government that self government for the public as well as the professional good shall be fully and demonstrably effective forthwith, or private initiative having failed in the public mind, public direction shall replace it.*

John D. Porterfield, M.D.

This is a succinct, accurate statement of our status in the public view by the Director of the Joint Commission for Accreditation of Hospitals. I am constantly being reminded that many, perhaps even a majority, in medicine in Tennessee are either blissfully unaware, or choose to ignore it. In spite of reams of material sent out from TMA, and numerous editorials and articles about the Bennett Amendment and PSRO in the JOURNAL—not to men-

tion all the material from AMA—many doctors in the state have “never heard of it.” It truly boggles the mind.

TMA asked each county society to designate some person to receive mailings on PSRO as the material proliferates. No reply was received from over half of the societies, including three of the four metropolitan societies. And yet when the axe falls, all of the unaware will blame TMA for not having told them. *This is to go on record that you have been told.* The blood be on your own head! The only trouble with that is, it will be on all our heads. I realize that most of you who will read this are aware of what is happening. But the only way to defeat the ignorance, apathy, and self delusion on the part of some of our colleagues is a massive education effort on our part.

We are about to be engulfed in an administrative mess the proportions of which can be only dimly perceived. But unlike other such, e.g. Medicare, this will involve doctors, and will absorb a great deal of our time and effort. Hoping it will go away is futile—that will only ensure that we will lose control, and will be controlled by bureaucrats.

Reprinted as a Special Item is a letter from George A. Zirkle, M.D., President of the Tennessee Foundation for Medical Care, Inc., which was sent to all county medical society officers and those physicians designated to receive PSRO information. You should have gotten the word, but there is a better than even chance you didn't. I wish to quote briefly from it here to make a couple of points.

The PSRO program will create a national network of local physician groups to review the necessity, quality and appropriateness of institutional care provided under the Social Security Act. It will make determinations as to the medical need for care and assure the quality of care rendered meets professionally recognized standards.

The PSRO will at first review services provided in and by institutions, such as hospitals and extended care facilities. In this review, the PSRO must determine if care provided institutionally could have been, within the definition of good medical practice, rendered effectively and more economically on an outpatient basis or in a less expensive inpatient facility. Particular attention must be paid to the medical necessity of admission, the type and extent of services ordered in the institution, and the length of stay.

As mentioned, initial PSRO activity will be limited to the review of services provided institutionally. However, expansion of function is anticipated so that eventually all services rendered by health care practitioners and providers will come under its purview.



Note that your office practice will eventually come under review, in addition to hospital cases. The teeth in the law is provision for *retroactive* non-payment of claims. Hospitals are already losing money in this way on Medicare patients, and it will eventually apply to you individually. Adequate record keeping is essential in substantiating claims.

We have a common cause with the hospitals in this area. I recognize the power struggle that often exists between hospital medical staffs and administration, which becomes extended to TMA vs. THA, but I have to say to you that we had better forget or at least ignore our differences in other areas and begin to cooperate, or the loss to both will be incalculable. Cooperation is beginning at the state level, but it will be of no effect unless it reaches the individual doctor and hospital.

Also published as a Special Item in this issue of the JOURNAL is an article reprinted from the Journal of the Medical Association of Georgia, giving some of the many ramifications of the law, and appended to it is a summary of the provisions of the law affecting you. Familiarize yourself with it. Our only hope is to stay informed and to try to stay one jump ahead of the bureaucrats, because they have the law and public opinion on their side.

J.B.T.

## STOP PRESS!

*We went to press on September 14 feeling reasonably secure in the knowledge that in Washington there was a Director of the Office of Professional Standards Review who was a practicing physician of good reputation with previous experience in the Colorado Foundation for Medical Care. On September 18, he wrote the following letter to the Assistant Secretary for Health of the Department of Health, Education and Welfare:*

*"I hereby submit my resignation as Director of the Office of Professional Standards Review as of October 1, 1973.*

*The Administration has made a significant commitment to the PSRO program, but that commitment has not been translated into action by Health. This extremely complex program with ramifications at all levels of medical care has been provided with limited resources, and those resources that were made available could not be effectively*

*administered and utilized because of the organizational structure.*

*This resignation is submitted with personal regret because I believe in the principles upon which the PSRO program was founded.*

*After October 1st, I would be willing to remain as a technical advisor to the program until a new director is found."*

WILLIAM BAUER, Director

Office of PSRO

*The implications of this are far reaching. Plainly put, the Administration, responding to the will of the Congress as expressed in Public Law 92-603, made certain commitments to the program and to Dr. Bauer. HEW, whose function it is to activate these commitments, failed to do so. It is obvious they acted in bad faith, and this underscores our concern expressed last month in an editorial, that regardless of the desires of the Congress and the Administration, HEW intends to run this their own way. This bodes ill for us.*

*The word is out in Washington that PSRO is dead, the reason being that HEW feels that Professional Services Review is too important to be left to the doctors, and that there should be considerable "consumer" input. This goes a long way toward explaining a lot of the shenanigans that went on in our meeting with the people from the Regional office in Atlanta, their explanation for which was quite lame and, in the light of recent events, obviously contrived.*

*Should we default in our responsibilities, the following alternative agencies for running PSRO are, in order, the state medicaid organizations, the medical schools, and insurance carriers. It is rather obviously the intention of HEW that we opt out. This makes it even more important that we do not, that we inform ourselves as to the law and as to what is going on, and that we put whatever pressure we can muster on our representatives in Washington to see that their instructions are carried out so that we will not be left at the mercy of the whimsy of HEW.*

J. B. T.

## ON THE MAKING OF A DOCTOR

*The thing that hath been is that which shall be:  
And that which is done is that which shall be done:  
And there is no new thing under the sun.*

Ecclesiastes 1:9

In the early days of this nation's history, the



major portion of its people lived in the fertile sheltered coastland between the Allegheny Mountains and the Atlantic Ocean, and only the hardiest of souls went west—when “west” meant anything “over the mountains.” They did so knowing that medical care would be nonexistent, but at that it was not much worse than the medical care which did exist in even the “civilized” areas.

Frontier medicine was a mixture of Indian remedies—some surprisingly effective—and home remedies brought from the east (often not so effective). Practitioners of medicine were those who proclaimed themselves so to be, or who met emergencies as they arose. Among the latter was General James Robertson, leader of the courageous band who came over the mountains down the Cumberland River to found Fort Nashboro, now Nashville. He performed the first surgical operation in this area—a trephine to allow for a covering of granulation tissue over the naked skull of a man who had been scalped, a procedure he is said to have learned from French traders, who learned it from the Indians.

Few attended medical school. Mostly they “read medicine” for a while with an established practitioner, then, when the preceptor felt his pupil was ready, or when the pupil tired of his status, he hung out a shingle of his own. Gen. Robertson’s son, Felix, the first white male child to be born in Nashville, was among the first to obtain a formal medical education. After “reading medicine” for a while, he spent a year at the University of Pennsylvania; there wasn’t then all that much to learn!

In addition to legitimate physicians, who, though limited, did their best with what was available, there was another group typified by the snake oil peddler—the patent medicine salesmen, cult healers, Indian remedy peddlers, homeopaths, naturopaths, water curers, (and later chiropractors), and what have you. In order to disseminate knowledge and to place some controls on medical practice, doctors began to organize into medical societies, the first Tennessee Medical Society being formed in Nashville in 1820, with Dr. Felix Robertson as one of its founders and its third president. It was not until another 50 years had passed that licensing laws came into existence with the advent of scientific medicine.

We’ve come a long way in the hundred years since, and even further in the two hundred

since General Robertson’s operation. The homeopaths and then the osteopaths were absorbed into medicine, and by basic science examinations cultists and chiropractors have been largely legislated out. The science of medicine flourished. Medicine specialized and subspecialized, (and perhaps we overdid it). In spite of its detractors, most of them sensationalists, medical care in the United States has been the equal of that anywhere else in the world and has often surpassed it. The situation has never been more fluid, however, than it is right now. There are those within and out of the profession who feel we may have thrown the baby out with the bathwater, and some even feel we may be trying to save the bathwater instead of the baby. There are indications (to them) that not only is all not well, but the situation may be deteriorating, and of course the blame is placed on medicine itself. We are told that not only are there not enough doctors, but that organized medicine is deliberately limiting the number of doctors produced. We are told that the doctors are not interested in their patients or in medicine. We are told that our medical care system is really a non-system, and it must be organized and regulated. And guess who needs to organize and regulate it!

It is not the purpose of this editorial to answer these charges. There are some things which I consider to be more basic to the problem, and I wish us to examine some of them.

There is a curious dichotomy in the bureaucratic mentality which on the one hand demands top quality, and yet on the other seems to say that if you have enough of anything and regulate it properly, the outcome is bound to be better regardless of quality. For our purposes here, it works this way:

You build a lot more medical schools (which themselves take up a lot of doctors and ancillary personnel—also tax money) and you lower the entrance requirements. Then in spite of burgeoning information you decrease the number of years from high school to residency; you dispense with the internship—also with all that junk like English and History, etc. (after all, who needs it?) In a year or so of preceptorship, (having also mostly dispensed with residency training) you turn ’em loose, and pretty soon all over the place you have lots of doctors, and everybody—but everybody—in the mountains and in the sticks and in the ghettos—



automatically gets *the best* of medical care.

But you have to be sure it is the best—and *stays* the best. So you put up review organizations, and you keep a good many of the docs busy finding out who didn't do what (or did) and why, and working out ways to be sure he does it next time (or doesn't, as the case may be). This requires an extensive continuing education program to give him what he should have gotten already but wasn't in school long enough to.

When I was at the Army's Medical Field Service School at Carlisle Barracks during World War II, the one course they insisted we *really* pass was map reading, for the reason that they once didn't, and there were as a consequence countless medical companies and battalions being lost all over Europe, they said. It is still hard to get where you want to go if you can't plot a course, and it's hard to plot a course if no one taught you how.

Nothing here should be construed as belittling family practice, which has a proper and important role, (See the letter in our MAIL BOX) nor is it to say categorically that we do not need more doctors (though many feel our existing institutions are now turning out a plenty—particularly in view of our declining birth rate). But a lot of absurdities are being passed around, and pretty soon people begin to believe them, and worse, to act on them. Do we want our successors (and this means also our younger associates—and our sons) to be unlettered technicians, either bureaucrats or their servants?

Can the "consumers" (and this, in medical schools, includes medical students) decide what is best? The public is long on demands but short on willingness to pay the price. They want it—as we all do—both ways. Medical school administrations too often are being swayed by demands embodying considerations other than turning out the best possible product. We wouldn't stand for it in making our astronauts' space capsules. It requires a remarkably short view to do so here. In spite of loud demands for top quality medical care, our course is being set for mediocrity.

Are we coming full circle? After a couple of centuries of struggle to get where we are (and I'm not, of course, implying it's perfect), are we on our way back to "frontier medicine"? (Chiropractors can now be reimbursed under Medicare and Medicaid for some services, making them "respectable.") I know it sounds

absurd. But think about it.

J.B.T.

*NOTE: As we go to press, a news item in Science (81:1027, Sept. 14, 1973) informs us that Harvard is abandoning its 3 year medical curriculum experiment.*

## KILLER-DISEASE SERIES

November 19 marks the premiere of a series of five television programs to be presented on Public Broadcasting stations across the country every fourth Monday evening. Subjects of the series are: *Heart Disease* (Nov. 19); *Inborn Genetic Defects* (Dec. 17); *Pulmonary Disease* (Jan. 14); *Trauma* (Feb. 11); and *Cancer* (March 11).

Designed to inform the public about methods of prevention, early detection and treatment of the five medical conditions that account for three out of four deaths in the United States, it is also planned as a springboard for community action. Many of the PBS stations will schedule additional local programming (to coordinate with the national presentation) by featuring local medical leaders and community follow-up activities.

This series is being produced by WNET-TV under a grant from Bristol-Myers Co. Its medical advisory board is impressive, and cooperating are the major national agencies and associations, such as The American Cancer Society, American Heart Association, American Diabetes Association, the AMA, American College of Surgeons, National PTA, etc., to name but a few.

The possibilities in any local situation to add to the impact on the public are innumerable, and the more the local participation, the more valuable it will be. It seems to me physicians should take the lead, and help organize community action.

This JOURNAL will carry each month, under Medical News in Tennessee, a release concerning the following month's program. Most areas in the state have access to some PBS-TV outlet, though unfortunately some do not. In this month's issue is a list of the participating Tennessee TV stations, as well as some in adjacent states which may reach some of our viewers.

This seems to be an important public service which we can and ought to perform. You can receive further information about what you can



do from your local PBS station, or the Public Information Committee of your local medical society. It won't organize itself, and anything such as this, to be really effective, must be translated into language and plans relevant locally. You are the one to do it!

J.B.T.



*To the Editor:* What about hospital care for indigents? Let me give some facts and some thoughts based on experience in this community and elsewhere. These do not necessarily reflect the opinions of the University of Tennessee Memorial Hospital, where I enjoy staff privileges, or of the Knoxville Academy of Medicine, where I enjoy active membership. These are my own opinions.

Medical needs can be ascertained by a "sorting by experts" very rapidly and effectively. In Seventh Army Support Command, sick call lines were long, and soldier time wasted, by having trained health aides sort and screen the ill, the worried well, and other folks who reported for sickness care. When a trained general practitioner was moved in to do the screening, the sickness care rapidly grew effective, with exact diagnoses, treatment, referral, and a net result of making a one-hour sick call out of what had been an all-day full waiting room. There is a lesson here for us, from the postwar US Army in Europe experience, which I reported at a health care conference in Garmisch in 1962.

Health care needs are 85% for "primary care," 10% for secondary care, and 5% for tertiary care, if an average population of Americans be considered. The hospital—or any other agency with complex inter-office communications—bogs down rapidly when it attempts to do what it cannot do or ought not do by definition. By definition, the hospital is the vehicle for secondary and some tertiary care services. Surgeons and internists use the hospital for what cannot better be accomplished in the private medical offices.

Primary health—or sickness needs, really—is the business of outpatient, drive-in or walk-in office practice. Offices are geared to handle efficiently (compared to hospitals) a varied assortment of out-patient medical needs. The diagnostic skills of a trained generalist are far superior to any present or past combination of "automated, computerized, interdepartmental, multi-centric methodology" we have seen. With greater efficiency comes lower cost. An office bacterial culture, for example, from a sore throat, can be done well and properly interpreted in 24 hours, with treatment spe-

cifically demonstrated in this period of time. Even when the patient is in bed in the hospital, the average hospital laboratory cannot hope to get the same sort of pertinent information in less than 48 hours.

The key here is that the physician is the starting place and the ending place in sickness care, and it does not help in primary care to separate the beginning and the end by a lot of hospital employee "middlemen" (three shifts per floor per hospital; three or more categories of health care personnel per shift.)

As county court and county commission consider health costs, they would do well to consider the decentralization of primary health care, getting it away from the hospital, with its tendency toward agglutinative self-aggrandisement. The things the hospital can do best are the secondary and the tertiary sickness needs, or health care needs, as its medical staff sees fit to accomplish. A full-service hospital is a wonderful thing when truly needed; it is counter-productive when it is made to try to answer a community's primary health care (sickness care) needs.

The training of primary care physicians—those doctors who can do rapidly, accurately and efficiently the 85% of a person's lifetime sickness care—has been made self-defeating, by purest accident. The terminal training ought really to be "on the job," in the office, along the lines of the "journeyman-apprentice" route which the trades have long proven worthwhile. Instead of this, we find hopeful "Family Physicians-in-training" forced to stay in the hospital-centered training experience right up until they leave for their attempts at private practice. This means that they cannot have acquired any of the lasting affective or intellectual settings they will need to survive as effective primary care physicians for a lifetime of practice. They encounter the unexpected "midnight phone calls" and the massive walking neuroses crowding into the office, and they are frustrated right out of Family Medicine and into a specialty or subspecialty. Look at the yellow pages of the Knoxville telephone directory and count the numbers of "Family Physicians" as compared to the others listed. Do we have 85% of our physicians in Knoxville as Family Physicians? Of course not. Yet this is what the "traffic will bear" and the "public demand."

There is another factor working to deprive us of "family docs," I believe. This is the emphasis on the rare illnesses, the unusual, the complex, the difficult-to-diagnose-and-to-treat, and the tendency of this emphasis to play into the hands of a "hospital-centered" health care economy. Of those complex and difficult situations which have definitive answers in health care, again I must emphasize that only 15% are properly answered in the hospital. The rest are outpatient needs. Do we find 85% of the health care dollar invested in neighborhood health centers, solo or group practices of quality primary care? Of course not. The hospitals have found ways to end up with the lions share of the dollar. Governmental and third-party insurers have set guidelines which often favor the hospital and its over-use; and we have seen the health costs escalate proportionately.

Finally, we are seeing a more rapid-than-ever esca-



lation of costs due to a phenomenon called the "ad-hocracy" of successive committees. There is one committee to receive grant moneys to do feasibility planning. A second committee supplants the first, and gets grant monies to do projected cost-accounting planning studies. A third committee begins to implement, after the first two committee surveys and estimates are interpreted. A fourth group (volunteer, or paid, professional or non-professional) then actually tries to do the work. There has been very little inter-group liaison; very little feedback among these separate "agencies." The hypothetical, untried, "brand-new" methodology gets priority, with its extreme costs and clumsy exercise. Often the only beneficiaries are the salaried administrative personnel. These boondoggles and porkbarrels are familiar to all of us in other contexts. But now, they are calling the shots in health (sickness) care as well. No one is at fault more than anyone else this is just what happens when we are not willing to discipline our hopes and dreams.

It may not be enough to do what our neighboring state of Kentucky has done; make health training monies contingent upon the production of hospital-centered "Departments of Family Medicine." We might ask local medical societies to elect their best Family Physicians to develop office practice preceptorships, and do everything possible to promote the success of this sort of rational approach to efficient health care in our community.

ROBERT PRESTON HORNSBY, M.D.  
606 Main Avenue, S.W.  
Knoxville, Tennessee 37902



BETHEA, JAMES M., Memphis, died August 10, 1973, age 71. Graduate of Harvard University School of Medicine, 1928. Member of Memphis-Shelby County Medical Society.

HAMILTON, JAMES J., Kingsport, died August 27, 1973, age 43. Graduate of University of Tennessee School of Medicine, 1960. Member of Sullivan-Johnson County Medical Society.

LAUGHLIN, C. B., Greeneville, died August 16, 1973, age 76. Graduate of University of Tennessee School of Medicine, 1928. Member of Greene County Medical Society.

MARTIN, FREDRICK A., Cumberland City, died August 26, 1973, age 93. Graduate of University of Tennessee School of Medicine, 1907. Member of Montgomery County Medical Society.

MEYER, ALPHONSE H., SR., Memphis, died August 26, 1973, age 91. Graduate of Washington University Medical School, 1911. Member of Memphis-Shelby County Medical Society.

WIGGALL, Richter H., Knoxville, died August 19, 1973, age 60. Graduate of University of Rochester School of Medicine, 1940. Member of Knoxville Academy of Medicine.

## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Robert Wright Montague, M.D., Lookout Mountain

### CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

R. R. Kenner, M.D., Jackson

Leon Koen, M.D., Trenton

### KNOXVILLE ACADEMY OF MEDICINE

William E. Harrison, M.D., Knoxville

### NASHVILLE ACADEMY OF MEDICINE

Eduardo Abisellan, M.D., Nashville

Roderick I. Bahner, M.D., Nashville

Fay M. Gaskins, M.D., Nashville

Linelle W. Haddox, M.D., Nashville

David E. Jenkins, M.D., Nashville

Robert K. Johnston, M.D., Nashville

William A. Kean, M.D., Nashville

Jimmi H. Logan, M.D., Nashville

Thomas P. Logan, M.D., Nashville

Vergil L. Metts, M.D., Nashville

W. Allen Oaks, M.D., Nashville

Dennis D. Patton, M.D., Nashville

Alvin B. Rosenbloom, M.D., Nashville

Michael J. Spalding, M.D., Nashville

William J. Stone, M.D., Nashville

Edward H. Welles, III, M.D., Nashville

Arthur L. Williams, M.D., Nashville

Larry G. Willis, M.D., Nashville

### MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

Louis Glazer, M.D., Memphis

Clarence G. Herrington, Jr., M.D., Memphis

Edgar E. Perry, M.D., Memphis

James H. White, Jr., M.D., Memphis

### ROANE-ANDERSON COUNTY MEDICAL SOCIETY

Richard G. Brantley, M.D., Oak Ridge

Victor W. McLaughlin, M.D., Oak Ridge

Sam O. Massey, M.D., Oak Ridge

## programs and news of medical societies

### Knoxville Academy of Medicine

The Academy met August 14, 1973 at the KAM Headquarters. Speaker for General Practice and Psychiatry was R. E. Yanowitch, M.D., psychiatrist with the Aviation Authority who spoke on "The Airplane



as an Instrument of Self Destruction." Dr. John Yumas, Ph.D., Biology Division, Oak Ridge National Laboratories spoke to the Pathology Section on "Induction of 'Malignant Adenocarcinoma' in the Mouse Lung." Stephen E. Natelson, M.D., spoke to the Pediatric Section on "Prognosis Following Head Trauma in Children." The Urology Section met to hear a discussion on PSRO.

The Academy's September meeting was held on the 11th at 8:00 p.m. A discussion centered around PSRO including Mr. William M. Cohan, Director, Department of Health Insurance in the Division of Medical Practice, American Medical Association and Morse Kochtitzky, M.D., President, Tennessee Medical Association.

### **Nashville Academy of Medicine**

The Academy offices have announced that approximately 50 physicians will again serve as team doctors for all senior high school football games in Davidson County. This marks the 18th consecutive year that physicians of Nashville Academy of Medicine—Davidson County Medical Society have served in this capacity.

A Medicine and Religion Seminar for Academy members and local ministers has been planned for Thursday, November 8 at West End United Methodist Church. The Seminar topic will be, "Basic Issues in the Care of the Critically Ill."

## **national news**

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

Legislation providing federal aid for establishment of a limited number of experimental Health Maintenance Organizations (HMO's) bills advanced in Congress. The House bill was much smaller in scale (five years, \$240 million, compared to \$805 million) than one passed the Senate.

In a report on the HMO bill, the House Commerce Committee discussed HMO's and their possible future role in health delivery. No specific number limitation was set in the House bill, but "it is anticipated that the limit of authorizations to \$240 million and the reality of the budget and appropriation process will provide an effective ceiling on the number of HMO's which could be established . . . Generally, however, the committee would anticipate that this legislation would be used to bring to the operating stage approximately 100 new HMO's."

The report stressed a five-year cut off. "All federal assistance to all assisted HMO's will

be completed by the end of five years for which authority is given. Thus, there will be no need to extend or renew this legislation in order to meet outstanding commitments."

After a discussion of "many arguments in favor of HMO's," the report said the committee "is concerned about the fact that HMO's (pre-paid group practice, contract practice, etc.) have not grown more rapidly than has been the case." The committee said it hoped the HMO program would clarify many problem areas, including such basic questions as "will federal assistance to HMO's work?" Other matters of concern were listed as whether federally-aided HMO's will be able to survive without federal help; how well will such organizations serve the poor, chronically ill, and aged; how will they work in ghettos, rural areas; what about consumer acceptability, quality of services, etc.

Noting that an HMO operates under an income limit (the premiums paid), the committee said one fear is that "it would be possible for an HMO to respond to this limit by discouraging the utilization of its services. For example, the committee is concerned with the possibility that elective surgery such as cataract extractions in elderly people, might be delayed in situations where an HMO is experiencing higher than expected utilization. These practices are to be discouraged."

Cautioning against allowing an HMO to have a monopoly anywhere, the Committee said:

"The heterogeneity of the HMO's envisioned by the committee is the key characteristic of the HMO program authorized by this legislation and deserves particular comment.

"In preparing the legislation, the committee has attempted not to describe exhaustively or in detail a single 'proper' system for the delivery of health services. The legislation defines desirable qualities or any system for health care delivery and offers to support any HMO which includes these qualities, however, it may be structured or organized in detail. *Thus, the HMO program sponsored by this legislation would not represent a single monolithic or federally-controlled health system, but a series of additions to our existing pluralistic system.*"

The Committee said that one reason there are few HMO-type programs operating now "is the high cost of planning, development, and initial operations. It has been estimated that the group practice model requires as many as 30,000 enrollees before the plan breaks even



with as much premium income as expenses. Planning costs for this type of HMO can go up to a half million dollars. Operating deficits until the break-even point can amount to \$2-3 million."

Unlike the Senate bill, the House legislation does not pre-empt state laws that restrict formation of HMO's. The reason given by the House Commerce Committee was "the rapid change already underway in state legislation designed to remove these barriers . . . (with) . . . approximately 20 states having already adopted legislation specifically authorizing HMO's."

### **Retirement Savings Restriction**

The outlook in Congress for a new restriction on retirement savings of professional service corporations and a companion liberalization of the Keogh plan for the self-employed was cloudy. Opposition to the limitation on the professional service corporations was reported strong in the House, though the Senate was expected to approve it.

The Senate Finance Committee said in its report on the bill that "it is contended that the present law in the retirement plan area creates an artificial incentive for the incorporation of businesses which more traditionally, and perhaps more appropriately, have been conducted in unincorporated form."

The committee restricted the amount an incorporated professional could save for retirement purposes and receive federal income tax deferred on to \$7,500 a year and not more than 15 per cent of income. The Keogh plan was liberalized to the same levels.

Noting that in recent years all states have adopted special incorporation laws which allow professional corporations, the committee said these "have been used increasingly by groups of professional persons, primarily to obtain the more favorable tax treatment for pensions generally available to corporate employees." The Internal Revenue Service's adamant opposition to these corporations and refusal to recognize them in the so-called Kintner regulations was rejected by the courts until "the service has now acquiesced and generally recognized these professional corporations as corporations for income tax purposes."

The committee said "the formation of professional corporations, a practice which has proliferated enormously in recent years, has had the effect of circumventing the limitations which

Congress intended to impose on deductible contributions by persons who are essentially, in most respects, self-employed."

Explaining why it didn't impose any limit on regular corporation tax deferrals for high-salaried executives, the committee said that in corporate plans a "much larger percentage of the contributions and benefits go to the 'rank and file' employees." This "financial drag effect tends to impose practical restrictions. . ."

### **Librium, Valium Action**

Librium and Valium will be subject to tighter federal restrictions. Under a Justice Department proposal, which has been accepted by the manufacturer, Roche Laboratories, the two tranquilizers will be placed in Category IV of the Controlled Substances Act. Other major tranquilizers already are in this category.

A prescription may be refilled no more than five times and a written prescription would be valid for no longer than six months. A renewal of the prescription after these limits would require a written prescription.

The proposal would place additional record-keeping and other requirements on drug manufacturers and pharmacists. Primary aim is to prevent diversion into illicit channels.

### **Cough-Cold Drug Action Delayed**

The Food and Drug Administration agreed to delay action against prescription cough, cold and allergy products. Interim guidelines will not be implemented until the FDA's over-the-counter review panel has issued a monograph, not expected until next year. Controversial guidelines issued last spring would have prohibited the use of combination antitussives and/or expectorants or decongestants for the common cold and the use of antitussives combined with antihistamines and decongestants for allergic or vasomotor rhinitis. Pharmaceutical and medical groups protested then the lack of input from the medical profession on the proposed ban. Witnesses urged that action be postponed until the scientific community can review the OTC panel's report which is slated to cover much the same ground.

### **GP Bill**

The Administration is planning to appeal a District Court Judge's ruling that President Nixon's pocket veto in 1970 of legislation to



aid training in the practice of family medicine was unconstitutional.

The veto of the \$225 million bill to help hospitals and medical schools set up family medicine departments came during a Christmas recess of Congress. The President claimed he killed the bill by use of the 'pocket veto' by refusing to sign the bill while Congress was out of town. Sen. Edward Kennedy (D., Mass.) who filed suit against the President, contended that it was an improper use of the 'pocket veto'. Actually, he said, the bill became law because the President did not veto it in the normal way thus giving Congress the chance to override it.

The Constitution gives the President 10 days in which to sign or veto a bill passed by Congress. If he does neither and Congress is in session the bill automatically becomes law. If Congress is in adjournment, the bill dies.

U.S. District Court Judge Joseph Waddy in Washington, D.C., held that the recess in question did not constitute an adjournment. The Judge gave the Administration until Sept. 9 to comply with his order.

### **Administration's Health Goals**

HEW Secretary Caspar Weinberger said that health care improvements will come from building "on our historic existing strengths" rather than "tearing down the entire structure because of our dissatisfactions."

In an address to the American Health Congress in Chicago, the Secretary said his Department was "absolutely and totally committed to do whatever may be necessary to assure that quality health care is readily and equally available to every American."

He said, however, that meeting this goal means devising "a total health strategy in which every possible program or option is carefully and objectively weighted—against each other and against the limits of our present revenue resources—before decisions are made."

"No longer are we committed to support all on-going programs," said the Secretary, "just because we once decided to start them."

"We have made the basic decision to build on our historic strengths in the health care field," he said, "closing obvious gaps, making needed improvements and instituting prudent innovations—rather than tearing down the entire structure because of our dissatisfactions and starting on something entirely different."

He said the Nation would not stand by while inner city residents lack decent health care, 120 American counties are without medical facilities and health personnel, costs skyrocket past the means of average citizens, and "the dangerous trend toward overspecialization in medical practice," continues.

"This Administration is prepared to pay the bill for an improved health care system," said Secretary Weinberger, "but only for concrete results."

He said that means "that while we're raising the Federal investment in health care—we are also reducing the unrealistic expectations of some program managers. We are also determined to make each Federal dollar stretch further."

He noted that for the current fiscal year, "the President has proposed a 21 percent increase in health funding. That amounts to nearly \$4 billion more—and brings the total Federal health investment to nearly twice the annual amount spent when President Nixon took office."

He said the Administration's "total health strategy involves a number of new initiatives and a conscious attempt to weave together existing programs which meet well-defined needs and new approaches which not only fill present gaps, but will meet estimated future needs."

He said the four highest priorities are:

National Health Insurance; Health Care Cost Control; the National Cancer and Heart Programs, and movement toward an all volunteer blood supply.

### **VA Bill Into Law**

Legislation signed into law by President Nixon extends Veterans Administration medical care to certain dependents, assures peacetime veterans the right to VA medical care and streamline VA rules on health care delivery.

Out patient medical care for non-service connected conditions is authorized when it would avoid the need for hospitalization.

The law, effective September 1:

- Extends eligibility for medical care to the wife or child of a person who has a total and permanent disability, resulting from a service-connected condition, and to the widow or child of a person who has died of a service-connected condition. Care will be provided in a manner similar to that in which medical care is furnished by the Armed Forces under the so-called



"CHAMPUS program" to dependents and survivors of active duty and retired personnel.

- Removes the requirement for wartime service as a condition of eligibility for VA medical care.

- Liberalizes rules on providing VA outpatient or ambulatory care to any veteran who is now eligible for VA hospitalization can be treated as an outpatient as necessary to preclude the need for hospital admission.

- Authorizes direct admission to nursing homes, at VA expense, of veterans requiring nursing home care for service-connected disabilities as stated by a VA physician.

- Specifically authorizes VA outpatient care for all disabilities for veterans with service-connected disabilities rated 80 percent or more disabling.

- Provides for the National Academy of Sciences to study the staffing of the VA hospitals and report on this subject.

- Extends VA mental health service to the families of veterans when it is related to the mental health or rehabilitation of an eligible veteran.

## medical news in tennessee

### Medical Audit Workshop set for November 15-16

The Joint Commission on Accreditation of Hospitals will conduct a Medical Audit Workshop in Nashville at the Hilton Inn on November 15 and 16. The Tennessee Medical Association will co-sponsor with the Tennessee Hospital Association.

### "The Killers" Medical Series Debuts on PBS-TV November 19

"The Killers"—five hour-and-a-half medical documentaries—will be presented over the 237 interconnected Public Broadcasting Service stations across the country each month through March starting November 19. The series is made possible by a grant from the Bristol-Myers Company, a multinational diversified manufacturer and marketer of products for health, personal care and the home, as part of a long-range program of corporate responsibility.

"The Killers" is designed to inform the public

about methods of prevention, early detection and treatment of the five medical conditions that accounted for 75.7 percent of deaths—1½ million—in the United States last year: Heart Disease, Inborn Genetic Defects, Pulmonary Disease, Trauma, and Cancer.

To increase the effectiveness of the series, local PBS stations will use the shows as springboards for community action. Working with local offices of national health organizations, community medical personnel and other interested citizens, many of the local stations are planning programming tied into the national series, as well as community follow-up activities such as lectures, workshops, demonstrations and informal clinics.

Control of editorial content of the series lies solely with WNET/13 Science Program Group, headed by Emmy and Peabody Award winner David Prowitt. Working with the group is an advisory board of twenty-three representatives of the health and medical professions selected by the Group.

### Heart Disease: The 20th Century Epidemic (Nov. 19, 8-9:30 P.M.)

Each year one million Americans are stricken for the first time with heart attacks. Nearly half of them die. While heart disease is thought of as a killer of the over-40 group, its lethal effects are felt by all ages: infants with congenital heart malformation; adolescents and young adults with rheumatic heart disease; the middle-aged with angina or a full-fledged coronary; the aged with a "worn-out" heart, often after years of mistreatment. Researchers have identified many pre-conditions of heart disease, including hypertension, fat-rich diets, obesity, lack of exercise, smoking, or a pre-existing genetic problem, but Americans are not yet committed to the concept of prevention vs. cure.

A dramatic indication of this lack of commitment is the rise in the incidence of heart attacks, especially among men in their early 20's and 30's, who suffer "sudden death syndrome"—fatal heart failure without warning—and among women. In a study done 20 years ago by Dr. David Spain of Brookdale Medical Center, he found that men under 51 were 12 times more vulnerable to heart attacks than women in the same age bracket. By 1971 that ratio narrowed four to one.

Statistics underline the seriousness of the



problem and emphasize how little is known about the heart and its mechanism. While progress is being made in surgical techniques, chemotherapy and prosthetic devices, the quality of health care is, at best, spotty. For example, a victim's chance of surviving a heart attack in a major urban area such as New York or Los Angeles has been estimated as 100 times better than in most of the rest of the United States.

What the medical profession, the individual and the community can do to prevent heart disease and equalize treatment are covered in this first program of "The Killers" series.

### **PBS Station in Tennessee and Adjacent Areas**

Chattanooga—WTCI—Ch. 45  
 Knoxville-Sneedville—WSJK—Ch. 2  
 Lexington—WLJT—Ch. 11  
 Memphis—WKNO—Ch. 10  
 Nashville—WDCN—Ch. 2  
 Florence, Ala.—WFIQ—Ch. 36  
 Huntsville, Ala.—WHIQ—Ch. 25  
 Bowling Green, Ky.—WKGB—Ch. 53  
 Murray, Ky.—WKMV—Ch. 21  
 Somerset, Ky.—WKSO—Ch. 29  
 Asheville, N.C.—WVNF—Ch. 33  
 Norton, Va.—WSVN—Ch. 47

## **personal news**

DR. DONALD G. CATRON, Knoxville, has been appointed director of the newly created Department of Operating Services at East Tennessee Baptist Hospital in Knoxville.

DR. DONALD P. CHANCE, Kingsport, has been named chief of surgery at Indian Path Hospital. Named to chief of medicine was DR. RALPH F. MORTON, of Kingsport.

DR. RUDOLPH M. LANDRY, Lookout Mountain, has been appointed assistant medical director for Interstate Life and Accident Insurance Company.

DR. ROBERT J. SMITH, Jackson, and DR. JOSEPH F. LENTZ, Nashville, have been appointed to the Tennessee Developmental Disabilities Council by Governor Winfield Dunn.

DR. GENE STOLLERMAN, Memphis, has been asked by the U.S. Public Health Service to serve as national chairman for the advisory panel evaluating bacterial vaccines.

DR. BERNARD M. ZUSSMAN, Memphis, recently spoke to the Allergy Section of the American Medical Association meeting in New York. His topic was "Tobacco Sensitivity in the Allergic Population: A Specific Allergic Entity."

## **announcements**

### **CALENDAR OF MEETINGS**

#### **STATE**

- |                    |   |
|--------------------|---|
| Oct. 31-<br>Nov. 3 | Southeastern Chapter—The Society of Nuclear Medicine, 14th Annual Meeting, Holiday Inn-Rivermont, Memphis |
| Nov. 6-9           | Tennessee Academy of Family Physician, 25th Annual Assembly, Gatlinburg                                   |
| Nov. 15            | Middle Tenn. Medical Association, Stones River Country Club, Murfreesboro.                                |

#### **NATIONAL**

- |            |  |
|------------|--|
| Oct. 15-19 | American College of Surgeons, Clinical Congress, Conrad Hilton, Chicago                            |
| Oct. 18-21 | American Academy of Child Psychiatry, Shoreham Hotel, Washington, D.C.                             |
| Oct. 19-26 | College of American Pathologists, Conrad Hilton Hotel, Chicago                                     |
| Oct. 19-26 | American Society of Clinical Pathologists, Palmer House, Chicago                                   |
| Oct. 20-25 | American Academy of Pediatrics, Palmer House, Chicago  |
| Oct. 21-26 | American Academy of Physical Medicine and Rehabilitation, Sheraton Park Hotel, Washington, D.C.    |
| Oct. 21-26 | American Society of Plastic and Reconstructive Surgeons, Diplomat Hotel, Hollywood, Fla.           |
| Oct. 23-25 | American College of Emergency Physicians, Fairmont Hotel, Dallas                                   |
| Oct. 25-27 | American College of Gastroenterology, Postgraduate course in Gastroenterology, Los Angeles, Calif. |
| Nov. 4-7   | American Urological Association, 71st Annual Meeting, Cerromar Beach Hotel, Dorado Beach, P.R.     |
| Nov. 11-16 | American Association of Blood Banks, Americana Hotel, Bal Harbour, Fla.                            |
| Nov. 14-17 | American Academy of Neurological Surgery, Huntington Hotel, Pasadena, Calif.                       |
| Dec. 1-4   | American Society of Hematology, Conrad Hilton Hotel, Chicago                                       |
| Dec. 1-5   | American Medical Association, 27th Annual Convention, Anaheim, Calif.                              |
| Dec. 1-6   | American Academy of Dermatology, Palmer House, Chicago   |
| Dec. 2-6   | American Academy for Cerebral Palsy, Sheraton Park Hotel, Washington, D.C.                         |
| Dec. 3-5   | Southern Surgical Association, the Homestead, Hot Springs, Va.                                     |
| Dec. 6-7   | American College of Chemosurgery, Palmer House, Chicago  |
| Dec. 13-16 | American Psychoanalytic Association, Waldorf-Astoria Hotel, New York                               |





## continuing education opportunities

*The continuing medical education accreditation program of TMA, has full approval by AMA's Council on Medical Education. If the continuing medical education program of your hospital or medical society is accredited by TMA's committee, you may receive for your attendance at its functions Category 1 credit for the AMA Physician's Recognition Award. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee 37203.*

### Meharry Medical College CME Course

The following continuing education course is being offered by the Meharry Medical College during 1973:

November 3    Radiation Technology, Learning Resources Center

### Vanderbilt University CME Courses

Date	Title, Location, Program Coordinator
Oct. 25-27	Child Neurology, Underwood Auditorium, Vanderbilt, Gerald Fenichel, M.D.

### Fourth Annual Autumn Pediatric Symposium

The Fourth Annual Autumn Pediatric Symposium at Vanderbilt University will be held October 27, 1973 with the topic being Pediatric Endocrinology—DIAGNOSIS AND MANAGEMENT OF COMMON PROBLEMS.

Guest faculty will include Dr. Melvin Grumbach, Chairman of the Department of Pediatrics, University of California at San Francisco, and Dr. Robert Stempfel, Chairman of the Department of Pediatrics, University of California at Davis.

For information write Ian M. Burr, M.D., Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tennessee 37232.

### Interstate Scientific Assembly: Oct. 29-Nov. 1

The 58th Annual Scientific Assembly of Interstate Postgraduate Medical Association will be held at the Palmer House, Chicago, October 29-November 1. This meeting, primarily designed for Family Physicians and Internists, is an educational service open to any licensed M.D. or D.O. in the U.S. and Canada. The fee is \$25 in advance or \$40 at the meeting, consisting of 24 hours of "live" television, lectures, symposia,

medical movies and informal discussions.

Details are available from Alton Ochsner, M.D., Program Chairman, Interstate Postgraduate Medical Association, P. O. Box 5445, Madison, Wisconsin 53705.

### Memphis Site of Four-Day Physician Seminar on Care of Injured, Nov. 14-17, 1973

A four-day seminar on "Life-Saving Measures for the Critically Injured" will be sponsored by the American College of Surgeons' Committee on Trauma and the department of surgery of The University of Tennessee College of Medicine, Memphis, Tenn., on November 14-17, 1973. It is designed particularly for rural and general practitioners.

Topics will include Assessment of the Critically Injured Patient; Pathophysiology of Shock—Clinical Correlations; Overview of Management of Critically Injured and Avoiding Medico-Legal Problems in the Critically Injured, Ventilation of the injured patient; Initial care of soft tissue wounds; Care of the multiple injury patient; Pulmonary physiology; Injuries of the lower extremity, abnormal injuries, head and spinal cord injuries; Fractures and dislocations; Blood and electrolyte replacement in the severely injured; Burns; Trauma and renal function; Coagulation and transfusion problems; The injured child; etc.

This seminar is approved by the American Medical Association for credit toward Physician's Recognition Award, by the American College of Emergency Physicians for continuing education credit for members, and by the American Academy of Family Physicians for 27 hours of credit.

For further information contact:

Dr. Harwell Wilson, professor and chairman  
Department of Surgery, University of Tennessee  
Memphis, Tennessee 38103

For housing: Holiday Inn, 969 Madison Ave.

Memphis, Tenn. 38104—or—

Sheraton Motor Inn, 889 Union Ave.  
Memphis, Tenn. 38103

### 17th Annual Conference of the American Association for Automotive Medicine Set

Papers ranging from the use of automobile air bags or belts as restraint systems to a program for reducing the highway toll through better medical screening of driver's license applicants will be presented during the 17th Annual Conference of the American Association for Automotive Medicine, to be held in Oklahoma City, Oklahoma, November 14-17, in the Hilton Inn West.

The purpose of the association is to encourage the development of highway and transportation safety and



to promote the growth and dissemination of new knowledge in the field of traffic and vehicular safety.

Medical topics for consideration at the 17th annual meeting include "Analysis of Rollover Accident Injury Causation Mechanisms," "A Study of Injury Severity Patterns from Belted and Unbelted Passengers," "An Objective Method of Assessing Laceration Damage to Simulated Facial Tissue," "Characterization of Lower Extremity Fractures as an Example of Accident File Data Analysis Techniques," and "Injury Mechanisms in Motorcycle Collisions."

Information on the meeting may be obtained from Page Waller, Office of Public Information and Health Education, Oklahoma State Department of Health, N.E., 10th and Stonewall, Oklahoma City, Oklahoma 73105.

### **American Association for Clinical Immunology and Allergy**

The American Association for Clinical Immunology and Allergy will hold its annual meeting at the Hilton Palacio Del Rio Hotel, San Antonio, Texas, on November 29-December 2, 1973.

Please direct inquiries to the Program Chairman:

Robert J. Brennan, M.D.

President-Elect

American Association for Clinical Immunology and Allergy

3471 N. Federal Highway

Ft. Lauderdale, Fla. 33306

### **Medical College of Georgia CME Courses**

<i>Date</i>	<i>Title, Location</i>
October 19	Cancer: Clinical Management, Medical College of Georgia, Augusta, Ga.
Oct. 29-Nov. 2	Internal Medicine, Medical College of Georgia, Augusta, Ga.
November 1-2	Family Planning, Medical College of Georgia, Augusta, Ga.
1974	
January 24-25	Clinical Psychiatry, Medical College of Georgia, Augusta, Ga.
February 6-8	Basic Electrocardiography, Medical College of Georgia, Augusta, Ga.
February 7	Medicine and Religion, Medical College of Georgia, Augusta, Ga.
February 14-15	Neurology in Adults and Children, Medical College of Georgia, Augusta, Ga.
March 21-23	Geriatric Problems in Family Practice, Medical College of Georgia, Augusta, Ga.
March 28-29	Gastroenterology, The Atlanta Marriott, Atlanta, Ga.
June 13-15	Internal Medicine, Buccaneer Motor Lodge, Jekyll Island, Ga.

### **National Conference on Virology and Immunology in Human Cancer**

November 29, 1973—December 1, 1973

Waldorf-Astoria Hotel

New York, New York

Sponsored by: American Cancer Society  
National Cancer Institute

The purpose of this Conference is to present to the medical and related professions the current developments in research and clinical investigation in virology and immunology and the assessment and implications of this work in the prevention and treatment of human cancer.

Sessions are open to all members of the medical and related health professions. Pre-registration is requested. There is no registration fee.

For information write:

Sidney L. Arje, M.D.

National Conference on

Virology and Immunology in Human Cancer

American Cancer Society, Inc.

219 East 42nd Street

New York, New York 10017

### **Professional Education Films Available**

NEW professional education films available in 16mm, color, from the American Cancer Society, 2519 White Avenue, Nashville, Tennessee 37204 are:

MELANOMAS: DIAGNOSIS AND TREATMENT  
PRIMARY CANCER OF BONE

NURSING MANAGEMENT OF THE PATIENT  
RECEIVING RADIATION THERAPY

### **American College of Physicians Announces Regional Meetings, Postgraduate Courses**

The ACP's one-to-three day Regional Meetings are designed to help practicing internists (and physicians in related specialties) keep abreast of new developments on the basic sciences and clinical medicine. They bring new advances in medical research from major research centers to local internists not able to travel to medical meetings outside of their own state and also provide a means for practitioners in the region to report to their colleagues on investigative work and clinical experiences of their own.

Averaging two-to-three days in duration, the ACP Postgraduate Courses provide opportunities for in-depth study of a wide range of subjects of importance to practicing physicians.

*Kentucky Regional Meeting*, Nov. 17, 1973, Stouffer Inn, Louisville, Kentucky. INFO: George W. Pedigo, Jr., M.D., 670 Medical Towers, Louisville, Kentucky 40202

*North Carolina Regional Meeting*, Dec. 6, 1973, Duke Medical Center, Durham, N.C. INFO: Joseph B. Stevens, M.D., 1017 Professional Village, Greensboro, N.C. 27401

*Tennessee Regional Meeting*, Jan. 18-19, 1974, Holiday Inn-Vanderbilt, Nashville, Tenn. INFO: Gerald I. Plitman, M.D., 1734 Madison Ave., Memphis, Tenn. 38104



*Mississippi-Louisiana* Regional Meeting, Feb. 15-16, 1974, Broadwater Beach Hotel, Biloxi, Miss. INFO: Guy D. Campbell, M.D., Veterans Administration Hospital, 1500 E. Woodrow Wilson Ave., Jackson, Miss. 39216

*Alabama* Regional Meeting, May 10-12, 1974, Point Clear, Alabama. INFO: Alwyn A. Shugerman, M.D., 1815 11th Ave., S., Birmingham, Ala. 35205

## Advanced Workshops in Facial Plastic and Reconstructive Surgery

The 1973-74 advanced Winter/Spring Workshops in head and neck plastic surgery co-sponsored by the American Academy of Facial Plastic and Reconstructive Surgery, Inc., have been announced by Roy B. Sessions, M.D., co-chairman, education committee of the Academy. The workshops are accredited by the AMA Continuing Education program.

Sept. 29-Oct. 3, 1973—"Plastic Surgery of the Nose: Rhinoplasty and Reconstruction." Co-sponsored by the Abraham Lincoln School of Medicine, Department of Otolaryngology, University of Illinois, Chicago.

Nov. 11-14, 1973—Basic Principles of Rhinoplasty, University of Cincinnati.

Jan. 28-Feb. 1, 1974—Concepts of Soft Tissue Surgery, Mercy Hospital, Pittsburgh.

Feb. 3-8, 1974—Septorhinoplasty, University of Toronto Medical School.

March 17-20, 1974—Basic Principles of Rhinoplasty, University of Tennessee, Memphis.

May 5-7, 1974—Advanced Rhinoplasty, UCLA Medical School, Los Angeles.

June 1-5, 1974—Plastic Surgery of the Aging Face, Abraham Lincoln School of Medicine, Department of Otolaryngology, University of Illinois, Chicago.

June 16-20, 1974—Rhinoplasty and Otoplasty, Mt. Sinai School of Medicine, New York.

June 21-22, 1974—Cosmetic Surgery of the Aging Eye, Mt. Sinai School of Medicine, New York.

For further information contact:

Roy B. Sessions, M.D.

Department of Otolaryngology

Baylor Medical School

1200 Moursund Ave.

Houston, Texas 77025

Phone: 713/529-4315

## Network for Continuing Medical Education Schedule of Upcoming NCME Programs

Oct. 8- HOW TO OVERDIAGNOSE PULMO-  
Oct. 21 NARY EMBOLISM, with Edward H. Morgan, M.D., Head of the Respiratory Disease Section, the Mason Clinic, Seattle, Washington.

WHAT YOU AND YOUR PATIENT SHOULD KNOW ABOUT CORONARY ARTERIOGRAPHY, with F. Mason Sones, Jr., M.D., Director of Cardiovascular Medicine and Cardiac Laboratory; and Donald B. Effler, M.D., Director of the Department of Cardio-

vascular and Thoracic Surgery, both of The Cleveland Clinic, Cleveland, Ohio. ANTIBIOTIC MISADVENTURE: "THE CASE OF SUPERINFECTION, PAR EXCELLENCE," with Harold C. Neu, M.D., Chief of Infectious Diseases, Columbia University College of Physicians and Surgeons, New York City. (A Drug Spotlight Program Feature.)

Oct. 22-  
Nov. 4

LAPAROSCOPIC STERILIZATION, with Thomas F. Dillon, M.D., Director of Obstetrics and Gynecology at Roosevelt Hospital, and Professor of Obstetrics and Gynecology, Columbia University College of Physicians and Surgeons, New York City.

TRANSIENT ISCHEMIC ATTACK—THE HISTORY, with Clark Millikan, M.D., Senior Consultant in Neurology, and Professor of Neurology, The Mayo Clinic, Rochester, Minnesota.

TRANSIENT ISCHEMIC ATTACK—THE PHYSICAL, with Clark Millikan, M.D., Senior Consultant in Neurology, and Professor of Neurology, The Mayo Clinic, Rochester, Minnesota.

Nov. 5-  
Nov. 18

RADIOLOGIC MANAGEMENT OF EARLY CANCER OF THE LARYNX, with Alexander D. Crosett, Jr., M.D., Director, Division of Radiation Therapy and Nuclear Medicine at Overlook Hospital, Summit, New Jersey; and Charles E. Langgaard, M.D., Attending Otolaryngologist, Summit Medical Group, Summit, New Jersey.

WHAT CAROTID ARTERIOGRAPHY CAN TELL YOU, with Michael D. F. Deck, M.D., Associate Attending Radiologist and Associate Professor of Radiology at Cornell University Medical Center in New York.

NATURAL CHILDBIRTH, with Alfred Tanz, M.D., Attending Obstetrician and Gynecologist, Lenox Hill Hospital, and Assistant Clinical Professor, New York Medical College, New York.

For more information on NCME, write The Network for Continuing Medical Education, 15 Columbus Circle, New York, New York 10023.

See September issue of the JOURNAL for programming details.

## 1973 POSTGRADUATE COURSES

### Postgraduate Courses

The American College of Physicians Postgraduate Courses are arranged through the cooperation of the directors and institutions involved. Tuition fees, in varying amounts, are charged for each course. For further information and registration forms, write to: Registrar ACP Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.



## October

*Individualization of Drug Therapy*, Oct. 2-24, 1973, Temple University Health Sciences Center, Philadelphia, Pa.

*Office Psychiatry for Internists*, Oct. 22-26, 1973, Faulkner Hospital, Jamaica Plain, Mass.

*Clinical Rheumatology: The Diagnosis and Treatment of Arthritis and Related Diseases*, October 29-Nov. 2, 1973, University of Arizona College of Medicine, Tucson, Ariz.

*Decision Making in Internal Medicine*, October 29-Nov. 2, 1973, Medical College of Georgia, Augusta, Ga.

## November

*Management of the Critically Ill Patient*, Nov. 2-4, 1973, University of Southern California School of Medicine, Los Angeles, Calif.

*Pulmonary Disease: Clinical, Immunological and Pathological Correlations*, November 12-14, 1973, Mayo Clinic, Rochester, Minn.

*Advances in Clinical Cancer*, Nov. 12-15, 1973, University of California, San Francisco, Calif.

*Hypertension: Current Trends*, Nov. 14-16, 1973, Cornell Medical Center, New York, N.Y.

*Human Hypersensitivity Disorders: Clinical Aspects and Pathogenetic Mechanisms*, Nov. 28-30, 1973, University of Michigan Medical Center, Ann Arbor, Mich.

## December

*Current Concepts of Clinical Infectious Diseases*, Dec. 5-7, 1973, University of Virginia School of Medicine, Charlottesville, Va.

## Myeloma Symposium

The Cancer Clinical Investigation Review Committee and the Clinical Investigations Branch of the National Cancer Institute are sponsoring a Symposium on Multiple Myeloma, October 22-23, 1973, in Atlanta, Georgia at the Royal Coach Motor Hotel. The object of this symposium is to provide an updating of the present state of the art and science of multiple myeloma, of monoclonal gammopathies in general, and of clinical considerations of this group of diseases in the broadest sense. It is designed to provide information to clinicians and to provide a forum for investigators in the field to exchange ideas and to develop new approaches for the improvement of the care of such patients. All interested clinicians and basic scientists are invited to attend the meeting. No registration fee is to be charged. For a detailed program and further information, write to: Mrs. Jeanne Schaub, MW 408, John Sealy Hospital Building, University of Texas Medical Branch, Galveston, Texas 77550.

## Course in Postgraduate Gastroenterology

The American College of Gastroenterology announces that its Annual Course in Postgraduate Gastroenterology will be given at the Biltmore Hotel in Los Angeles, California, on Thursday, Friday and Saturday, October 25, 26 and 27, 1973, immediately following the 38th Annual Convention of the College which will also be held there on October 22, 23

and 24. A special lecture, summarizing the applied physiology of the gastrointestinal hormones that have come into prominence, is another feature of the Course. Further information and enrollment may be obtained from The American College of Gastroenterology, 299 Broadway, New York, New York 10007.

## Tutorial on Management of Early Cervical Neoplasia

The third tutorial on management of the patient with early cervical neoplasia will be held November 30 through December 1, 1973 at the Center for Continuing Education at the University of Chicago. This course is especially designed for the gynecologist, obstetrician, pathologist and interested medical practitioner, and provides an integrated approach to problems of management of patients with early cervical neoplasia. The course will consist of theoretical and practical sessions, panel discussion, discussions in small groups, and colposcopy seminars which should familiarize the physician with current methods and practices of early cancer detection. Classification of lesions depending on cyto- and histopathologic criteria will also be presented. For further information, contact: The University of Chicago, Center for Continuing Education, 1307 E. 60th Street, Chicago, Illinois 60637.

## Clinico-Pathologic Correlations in Cardiovascular Disease

This course will be presented by The American College of Cardiology, November 27-29, 1973, in Williamsburg, Virginia. The morphologic basis of cardiac dysfunction will be emphasized. The structural changes will be discussed primarily in terms of their functional importance. Prominent cardiovascular clinicians and cardiovascular pathologists will combine efforts to discuss four major cardiac diseases from both functional and anatomic viewpoints. Included are coronary, valvular, hypertensive and myocardial heart disease. Audience participation is encouraged.

A registration fee of \$125 is charged for members of the American College of Cardiology. Non-members of the College pay a fee of \$175. The registration fees include the three luncheons and a reception.

This program has been accredited by the Council on Medical Education of the American Medical Association, and is acceptable for credit toward the AMA Physician's Recognition Award.

For further information, contact Miss Mary Ann McInerney, Director, Department of Continuing Education Programs, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md. 20014.

## First Annual Medical Seminar—Kidney Focus 1973

The Kidney Foundation of East Tennessee is holding their First Annual Medical Seminar on November 10, 1973, at the University of Tennessee Student Center, Knoxville, Tennessee. Registration begins at 8:00 a.m. with preregistration by mail preferred. Fee \$7.50 includes luncheon. The top renal specialists from across Tennessee will be on their faculty.





## **PSRO—Professional Standards Review Organization**

Last October an immense program on the medical care horizon began to form. This vast program moved quickly into distinguishable shape; and, behold the letters P S R O became recognizable. In the intervening months this program has inched toward a zenith. Its slow movement still leaves in question the status of how it will function.

PSRO has quickly become the accepted abbreviation for Professional Standards Review Organization. By either designation it is (and will be for some time) shrouded by apprehension and uncertainty, particularly by those most directly concerned.

On October 30, 1972, President Nixon signed Public Law 92-603. This 1972 Social Security-Medicare-Medicaid Bill includes no fewer than 95 changes in the various programs noted in its title. One innovation, which has significant implications for the entire health care community, as well as the public, is this Professional Standards Review Organization (PSRO) proposition.

### **What is the PSRO to Accomplish?**

Its declaration of purpose reads as follows: "In order to promote the effective, efficient, and economical delivery of health care services of proper quality for which payment can be made in whole or in part, under the Social Security Act and in recognition of the interests of patients, the public, practitioners, and providers in improved health care services, it is the purpose of this program to assure, through the application of suitable procedures of professional standards review, that the services for which payment would be made conform to appropriate professional standards for the provision of health care and that payment for these services will be made (1) only when, and to the extent, medically necessary, as determined in the exercise of reasonable limits of professional discretion; and (2) in the case of services provided by a hospital or other health care facility on an inpatient basis, only when and for the period these services cannot, consistent with professionally recognized health care standards,

effectively be provided on an outpatient basis or more economically in an inpatient health care facility of a different type, as determined in the exercise or reasonable limits of professional discretion."

Boiled down, the PSRO program will create a national network of local physician groups to review the necessity, quality and appropriateness of institutional care provided under the Social Security Act. It will make determinations as to the medical need for care and assure the quality of care rendered meets professionally recognized standards.

The PSRO will at first review services provided in and by institutions, such as hospitals and extended care facilities. In this review, the PSRO must determine if care provided institutionally could have been, within the definition of good medical practice, rendered effectively and more economically on an outpatient basis or in a less expensive inpatient facility. Particular attention must be paid to the medical necessity of admission, the type and extent of services ordered in the institution, and the length of stay.

As mentioned, initial PSRO activity will be limited to the review of services provided institutionally. However, expansion of function is anticipated so that eventually all services rendered by health care practitioners and providers will come under its purview. Specific PSRO duties will include maintenance and regular review of patient and provider profiles, as well as the collection, maintenance and analysis of data pertinent to its various functions. By law, the PSRO must apply professionally-developed norms of care based on regional patterns of medical practice in its evaluation and review of services rendered in the area.

The Secretary of Health, Education and Welfare must designate PSRO areas throughout the country by January 1, 1974, and follow this by entering into conditional and eventually operational agreements with qualified organizations in these areas. In this process the new law affords priority to organizations which are non-profit, professional associations or component organizations composed of licensed and practicing doctors of medicine or osteopathy.

PSRO's will be organizations of most of the physicians practicing in a geographic area. If the physicians are assigned responsibility for reviewing hospital care, the law says they must have active staff privileges in at least one of the PSRO area participating hospitals.



Following for re-emphasis are salient points regarding PSRO:

- PSRO will involve physician evaluation of the appropriateness of patient care in hospitals and other institutions. This may take the form of evaluating (1) conditions prior to admission, (2) the care received during hospitalization, and (3) the length of hospitalization.

- Formation of a PSRO is expected to start at the local level. Local physicians (this has been interpreted to mean an entire state in certain circumstances) are to be responsible for the development and operation of the PSRO.

- PSRO is applicable to Medicare and Medicaid at this time.

- PSRO is not to deal with fees or charges.

- If a practicing physician organization with potential for developing a PSRO does not come forth by January 1, 1976, the HEW Secretary can designate a physician organization to serve.

- The first priority is the designation of PSRO areas; HEW must do this by January 1, 1974.

- The minimum number of physicians for a PSRO area has been noted as 300. A maximum has been mentioned of from 2,500 to 3,000.

- Norms of care will be developed locally by physicians. They will judge whether a colleague has met the locally established criteria.

- PSRO is justified on the basis that government is paying for a significant amount of medical care. It thus believes through PSRO it will be assured the care received is appropriate.

On August 9, 1973, an all-day meeting called by the Regional Office of HEW, was conducted in Nashville for the purpose of discussing area designations of PSRO's in Tennessee. The Tennessee Foundation for Medical Care, Inc., presented a proposal already made to the Office of Professional Standards Review, producing a map showing seven districts in Tennessee to include a statewide-coordinated PSRO organization. The breakdown of the State called for the four metropolitan counties of the State to be separate PSRO's, and the remainder of the State divided into the three grand divisions of the State for peer review organizations. This would be a total of seven local area PSRO's. No action has been taken by HEW on this proposal. The Tennessee Foundation for Medical Care, Inc., will continue to pursue fulfillment of its recommendation.

The Memphis and Shelby County Medical Society also submitted a proposal recommending that the Memphis and Shelby County be a separate and autonomous area designated for a PSRO organization.

GEORGE A. ZIRKLE, M.D., *President*  
Tennessee Foundation for Medical  
Care, Inc.

\* \* \*

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Next programs are:

Aug. 31-Sept. 2

Oct. 26-28

Nov. 16-18

Contact: Mortimer Enright  
Director, AMA Speakers  
and Leadership Programs  
535 N. Dearborn St.  
Chicago, Ill. 60610  
(312) 751-6484





## PSRO—Placebo or Therapy?

L. C. BUCHANAN, M.D.,† Decatur

On October 30 last, the Presidential signature made Public Law 92-603 the law of the land.

Many government officials as well as leaders of our profession, have aptly observed that the implementation of this statute will impact upon the practice of medicine, the medical profession itself, and most importantly, the American people, far greater than has the Medicare program. While a timetable of implementation is precisely specified in the law, the actual design, mechanism of construction, operation and maintenance of the Gargantuan project is left almost entirely to the preassumed wisdom, ability, and philosophic judgements of the Secretary of HEW. The detailed plans and specifications of structure and operation to be promulgated through "administrative regulations" will be made available for our study and appraisal at the pleasure of the Secretary.

Nationwide, in forums varying from elaborate symposia and seminars to dressing room dialogues, PSRO is being "cussed" and debated, acclaimed and denounced and, all too often, the loudest voice is from one having the least familiarity with the facts available from the law as written. Random inquiry recently of 20 practicing physicians in our community revealed only eight with any real conception of what PSRO really is, and only two were able to demonstrate they had read any appreciable amount of the statute as published.

### PRIMARY QUESTIONS

What and why PSRO? How will it work? Is it voluntary or compulsory law? Is it a good or a "bad" law? If I have a choice, what is it? What relation or effect does it have with reference to AMA? MAG? The Georgia Medical Care Foundation?

PSRO—Professional Standards Review Organization—is in essence a gigantic structure allegedly to insure "quality control" over the entire gamut of health care services. The most naive student of this law quickly sees that the

prime intent of the program is to control and reduce the *cost* of health care. The review process is to insure that fees charged by providers of health care (physicians, osteopaths, podiatrists, and in some cases physical therapists and chiropractors) fall within established "norms." The review is to further determine if the service rendered was indeed "medically necessary" at all, and if so, was the treatment rendered appropriate for the condition; viz., was it rendered in the proper place? (Review will be on services performed in your office, in a hospital as in-patient or out-patient, in an E.C.F., in patient's home, etc., etc.) In cases of in-patient service, was the length of stay within pre-established norms for the diagnosis or condition? Was there overutilization or inappropriate use of drugs, x-rays, laboratory tests? Was surgical treatment necessary?

As regards office services, were the number of visits justifiable for the diagnosis? Was the laboratory testing appropriate or unnecessary? Were x-rays obtained indicated? Were the number and frequency and, yes, the type of injections, within the norms established for that diagnosis? (The present law provides that, "a Medicare audit must encompass review of both Medicare and non-Medicare patient records in order to verify the amount for reimbursement to the providers.")\*

In an extended care facility, is the beneficiary receiving the proper level of care, i.e., does the patient's condition warrant skilled nursing care, intermediate care or custodial care? (Obviously continuing review and repeated evaluation of every patient in every E.C.F. in the nation will be necessary to keep the review opinion current.)

To further enumerate the provisions of the intended review process is beyond the scope of this editorial but the detailed specifics of the review process, and the authority to probe into the minutia of any course of treatment, are all too clearly defined in the law.

Whether the law is a "good" or "bad" law is presently a matter of individual judgment. This writer believes the law to be poorly conceived, impractically designed and impossible to fully implement and enforce. The sheer cost of PSRO establishment and operation will defeat the announced goal of reducing the cost

† Vice President, Board of Directors of the Georgia Medical Care Foundation and Vice Chairman of MAG Council.

\* Medicare Regulation 405.405 and 405.454. Paragraph 7645, Note 13, Accessibility of Non-Medicare Patients Medical Records.



of medical care. The true quality of medical care will suffer immeasurably in the process.

#### PAYMENT MEANS COMPLIANCE

No physician worthy of our profession can advocate violation of federal law. That is not the question. The PSRO statute does not *compel* a practitioner to participate; however, initially physicians are being sought to actually *be* the PSRO. This is where the water hits the wheel, and it is here that we must make an awesome decision.

No matter who are the bodies actually constituting a PSRO unit, if a practitioner or provider of service accepts *any* payment "in part or in whole" from the government, he (or the institution) absolutely must be constantly "in compliance" with PSRO law and regulations under penalty of retroactively having to repay the estimated (by the Secretary) cost of fee overpayment and/or cost of any overutilization (or \$5,000.00, whichever is smaller). He may also be terminated as a future recipient of any federal payments. If, on the other hand, he refuses to accept payment from the government "in part or in whole" for any service and instead looks to his patient for payment by direct billing, he then is not subject to PSRO law or any of its regulations. This, at least for the present, can be for each of us an individual decision.

#### CAN PSRO WORK?

If practicing physicians of integrity, truly concerned for their patients' ultimate good, do not unite and attempt the operational control of PSRO, including an uncompromising demand to be allowed to establish all the "norms" to be used, then (after 1976) the Secretary can proceed to designate others to constitute the PSRO units. Then the real question: are we being offered a placebo? Is this an impotent, non-specific gesture being offered to our profession with the full knowledge that it cannot really work and therefore help "cure" the high cost of medical care? When it proves to be ineffectual, can the bureaucrats then say, "We gave the Doctors a chance to cut medical costs and they failed! We must now go on to total National Health Insurance."

Or is this really a therapeutic agent with some promise? Can we take it out of the hands of the unskilled laity and demonstrate our unity of purpose to continue quality care to the sick and injured, can we muster the strength of unity

and the perceptive leadership necessary to accomplish several things? Will the Congress and the Secretary give us the authority to cut health care costs where we know real savings, big savings, can be effected? If we are controlling PSRO, can we then eliminate the excessive costs incident to overstaffing, inefficiency and costly wastes we have proven through our own Foundation do exist in those non-medical agencies now doing review? Will we be given the authority to review in depth and report the inefficiency and wastes only doctors know exist in many areas of hospital services? Would we as PSRO at our local level (where the Congress has stated PSRO should operate) be allowed to direct the level, and therefore the cost, of necessary E.C.F. patient care? These may seem unlikely but they are possibilities. The real cost savings that can be effected in the overall health care system in this country is not in further cutting doctors fees but in some of the areas just enumerated. It is an outworn cliché but it is now obvious that either "we do it or they will."

What can you do?

You can study Public Law 92-603 which follows this article and read the extracted pertinent portions of the Report of the Senate Finance Report of September 26, 1972. (Available in limited numbers from MAG headquarters. Reading time—both approximately one and a half to two hours.)

You can give careful, prayerful thought and introspection regarding what is the wisest decision to be made by you as an individual and all of us collectively.

You, and I, and all of us, had better realize again that whatever the true majority decision is on this vital and complex problem, unless we present a united front to the onslaught, we and those who follow us will probably never see quality medicine practiced as in the past and present.

PSRO—placebo, or therapy. . . ?

Reprinted from the J.M.A.  
Georgia, May 1973

#### Public Law 92-603

*The following is a reprint of provisions of the "Social Security Amendments of 1972," passed by the 92nd Congress October 30, 1973, which relate to Professional Standards Review Organizations and pertinent Medicare amendments.*



## “TITLE XI—GENERAL PROVISIONS AND PROFESSIONAL STANDARDS REVIEW”

### “Part A—General Provisions”

(b) Title XI of such Act is further amended by adding the following:

### “Part B—Professional Standards Review”

#### “DECLARATION OF PURPOSE”

“Sec. 1151. In order to promote the effective, efficient, and economical delivery of health care services of proper quality for which payment may be made (in whole or in part) under this Act and in recognition of the interests of patients, the public, practitioners, and providers in improved health care services, it is the purpose of this part to assure, through the application of suitable procedures of professional standards review, that the services for which payment may be made under the Social Security Act will conform to appropriate professional standards for the provision of health care and that payment for such services will be made—

“(1) only when, and to the extent, medically necessary, as determined in the exercise of reasonable limits of professional discretion; and

“(2) in the case of services provided by a hospital or other health care facility on an inpatient basis, only when and for such period as such services cannot, consistent with professionally recognized health care standards, effectively be provided on an outpatient basis or more economically in an inpatient health care facility of a different type, as determined in the exercise of reasonable limits of professional discretion.

#### “DESIGNATION OF PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS”

“Sec. 1152. (a) The Secretary shall (1) not later than January 1, 1974, establish throughout the United States appropriate areas with respect to which Professional Standards Review Organizations may be designated, and (2) at the earliest practicable date after designation of an area enter into an agreement with a qualified organization whereby such an organization shall be conditionally designated as the Professional Standards Review Organization for such area. If, on the basis of its performance during such period of conditional designation, the Secretary determines that such organization is capable of fulfilling, in a satisfactory manner, the obligations and requirements for a Profes-

sional Standards Review Organization under this part, he shall enter into an agreement with such organization designating it as the Professional Standards Review Organization for such area.

“(b) For purposes of subsection (a), the term ‘qualified organization’ means—

“(1) when used in connection with any area—

“(A) an organization (i) which is a non-profit professional association (or a component organization thereof), (ii) which is composed of licensed doctors of medicine or osteopathy engaged in the practice of medicine or surgery in such area, (iii) the membership of which includes a substantial proportion of all such physicians in such area, (iv) which is organized in a manner which makes available professional competence to review health care services of the types and kinds with respect to which Professional Standards Review Organizations have review responsibilities under this part, (v) the membership of which is voluntary and open to all doctors of medicine or osteopathy licensed to engage in the practice of medicine or surgery in such area without requirement of membership in or payment of dues to any organized medical society or association, and (vi) which does not restrict the eligibility of any member for service as an officer of the Professional Standards Review Organization or eligibility for and assignment to duties of such Professional Standards Review Organization, or, subject to subsection (c) (i).

“(B) such other public, non-profit private, or other agency or organization, which the Secretary determines, in accordance with criteria prescribed by him in regulations, to be of professional competence and otherwise suitable; and

“(2) an organization which the Secretary, on the basis of his examination and evaluation of a formal plan submitted to him by the association, agency, or organization (as well as on the basis of other relevant data and information), finds to be willing to perform and capable of performing, in an effective, timely, and objective manner and at reasonable cost, the duties, functions, and activities of a Professional Standards Review Organization required by or pursuant to this part.

“(c) (1) The Secretary shall not enter into



any agreement under this part under which there is designated as the Professional Standards Review Organization for any area any organization other than an organization referred to in subsection (b) (1) (A) prior to January 1, 1976, nor after such date, unless, in such area, there is no organization referred to in subsection (b) (1) (A) which meets the conditions specified in subsection (b) (2).

"(2) Whenever the Secretary shall have entered into an agreement under this part under which there is designated as the Professional Standards Review Organization for any area any organization other than an organization referred to in subsection (b) (1) (A), he shall not renew such agreements with such organization if he determines that—

"(A) there is in such area an organization referred to in subsection (b) (1) (A) which (i) has not been previously designated as a Professional Standards Review Organization, and (ii) is willing to enter into an agreement under this part under which such organization would be designated as the Professional Standards Review Organization for such area;

"(B) such organization meets the conditions specified in subsection (b) (2); and

"(C) the designation of such organization as the Professional Standards Review Organization for such area is anticipated to result in substantial improvement in the performance in such area of the duties and functions required of such organizations under this part.

"(d) Any such agreement under this part with an organization (other than an agreement established pursuant to section 1154) shall be for a term of 12 months; except that, prior to the expiration of such term such agreement may be terminated—

"(1) by the organization at such time and upon such notice to the Secretary as may be prescribed in regulations (except that notice of more than 3 months may not be required); or

"(2) by the Secretary at such time and upon such reasonable notice to the organization as may be prescribed in regulations, but only after the Secretary has determined (after providing such organization with an opportunity for a formal hearing on the matter) that such organization is not substantially complying with or effectively carrying out the provisions of such agreement.

"(e) In order to avoid duplication of functions and unnecessary review and control activities, the Secretary is authorized to waive any or all of the review, certification, or similar activities otherwise required under or pursuant to any provision of this Act (other than this part) where he finds, on the basis of substantial evidence of the effective performance of review and control activities by Professional Standards Review Organizations, that the review, certification, and similar activities otherwise so required are not needed for the provision of adequate review and control.

"(f) (1) In the case of agreements entered into prior to January 1, 1976, under this part under which any organization is designated as the Professional Standards Review Organization for any area, the Secretary shall, prior to entering into any such agreement with any organization for any area, inform (under regulations of the Secretary) the doctors of medicine or osteopathy who are in active practice in such area of the Secretary's intention to enter into such an agreement with such organization.

"(2) If, within a reasonable period of time following the serving of such notice, more than 10 per centum of such doctors object to the Secretary's entering into such an agreement with such organization on the ground that such organization is not representative of doctors in such area, the Secretary shall conduct a poll of such doctors to determine whether or not such organization is representative of such doctors in such area. If more than 50 per centum of the doctors responding to such poll indicate that such organization is not representative of such doctors in such area the Secretary shall not enter into such an agreement with such organization.

#### "REVIEW PENDING DESIGNATION OF PROFESSIONAL STANDARDS REVIEW ORGANIZATION"

"Sec. 1153. Pending the assumption by a Professional Standards Review Organization for any area, of full review responsibility, and pending a demonstration of capacity for improved review effort with respect to matters involving the provision of health care services in such area for which payment (in whole or in part) may be made, under this Act, any review with respect to such services which has not been designated by the Secretary as the full responsibility of such organization, shall be re-



viewed in the manner otherwise provided for under law.

#### **"TRIAL PERIOD FOR PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS"**

"Sec. 1154. (a) The Secretary shall initially designate an organization as a Professional Standards Review Organization for any area on a conditional basis with a view to determining the capacity of such organization to perform the duties and functions imposed under this part on Professional Standards Review Organizations. Such designation may not be made prior to receipt from such organization and approval by the Secretary of a formal plan for the orderly assumption and implementation of the responsibilities of the Professional Standards Review Organization under this part.

"(b) During any such trial period (which may not exceed 24 months), the Secretary may require a Professional Standards Review Organization to perform only such of the duties and functions required under this part of Professional Standards Review Organization as he determines such organization to be capable of performing. The number and type of such duties shall, during the trial period, be progressively increased as the organization becomes capable of added responsibility so that, by the end of such period, such organization shall be considered a qualified organization only if the Secretary finds that it is substantially carrying out in a satisfactory manner, the activities and functions required of Professional Standards Review Organizations under this part with respect to the review of health care services provided or ordered by physicians and other practitioners and institutional and other health care facilities, agencies, and organizations. Any of such duties and functions not performed by such organization during such period shall be performed in the manner and to the extent otherwise provided for under law.

"(c) Any agreement under which any organization is conditionally designated as the Professional Standards Review Organization for any area may be terminated by such organization upon 90 days notice to the Secretary or by the Secretary upon 90 days notice to such organization.

#### **"DUTIES AND FUNCTIONS OF PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS"**

"Sec. 1155. (a) (1) Notwithstanding any

other provision of law, but consistent with the provisions of this part, it shall (subject to the provisions of subsection (g)) be the duty and function of each Professional Standards Review Organization for any area to assume, at the earliest date practicable, responsibility for the review of the professional activities in such area of physicians and other health care practitioners and institutional and noninstitutional providers of health care services in the provision of health care services and items for which payment may be made (in whole or in part) under this Act for the purpose of determining whether—

"(A) such services and items are or were medically necessary;

"(B) the quality of such services meets professionally recognized standards of health care; and

"(C) in case such services and items are proposed to be provided in a hospital or other health care facility on an inpatient basis such services and items could, consistent with the provision of appropriate medical care, be effectively provided on an outpatient basis or more economically in an inpatient health care facility of a different type.

"(2) Each Professional Standards Review Organization shall have the authority to determine, in advance, in the case of—

"(A) any elective admission to a hospital, or other health care facility, or

"(B) any other health care service which will consist of extended or costly courses of treatment,

whether such service, if provided, or if provided by a particular health care practitioner or by a particular hospital or other health care facility, organization, or agency, would meet the criteria specified in clauses (A) and (C) of paragraph (1).

"(3) Each Professional Standards Review Organization shall, in accordance with regulations of the Secretary, determine and publish, from time to time, the types and kinds of cases (whether by type of health care or diagnosis involved, or whether in terms of other relevant criteria relating to the provision of health care services) with respect to which such organization will, in order most effectively to carry out the purpose of this part, exercise the authority conferred upon it under paragraph (2).

"(4) Each Professional Standards Review Organization shall be responsible for the arranging for the maintenance of and the regular re-



view of profiles of care and services received and provided with respect to patients, utilizing to the greatest extent practicable in such patient profiles, methods of coding which will provide maximum confidentiality as to patient identity and assure objective evaluation consistent with the purposes of this part. Profiles shall also be regularly reviewed on an ongoing basis with respect to each health care practitioner and provider to determine whether the care and services ordered or rendered are consistent with the criteria specified in clauses (A), (B), and (C) of paragraph (1).

“(5) Physicians assigned responsibility for the review of hospital care may be only those having active hospital staff privileges in at least one of the participating hospitals in the area served by the Professional Standards Review Organization and (except as may be otherwise provided under subsection (e) (1) of this section) such physicians ordinarily should not be responsible for, but may participate in the review of care and services provided in any hospital in which such physicians have active staff privileges.

“(6) No physician shall be permitted to review—

“(A) health care services provided to a patient if he was directly or indirectly involved in providing such services, or

“(B) health care services provided in or by an institution, organization, or agency, if he or any member of his family has, directly or indirectly, any financial interest in such institution, organization, or agency.

For purposes of this paragraph, a physician's family includes only his spouse (other than a spouse who is legally separated from him under a decree of divorce or separate maintenance), children (including legally adopted children), grandchildren, parents, and grandparents.

“(b) To the extent necessary or appropriate for the proper performance of its duties and functions, the Professional Standards Review Organization serving any area is authorized in accordance with regulations prescribed by the Secretary to—

“(1) make arrangements to utilize the services of persons who are practitioners of or specialists in the various areas of medicine (including dentistry), or other types of health care, which persons shall, to the maximum extent practicable, be individuals engaged in the prac-

tice of their profession within the area served by such organization;

“(2) undertake such professional inquiry before or after, or both before and after, the provision of services with respect to which such organization has a responsibility for review under subsection (a) (1);

“(3) examine the pertinent records of any practitioner or provider of health care services providing services with respect to which such organization has a responsibility for review under subsection (a) (1) and

“(4) inspect the facilities in which care is rendered or services provided (which are located in such area) of any practitioner or provider.

“(c) No Professional Standards Review Organization shall utilize the services of any individual who is not a duly licensed doctor of medicine or osteopathy to make final determinations in accordance with its duties and functions under this part with respect to the professional conduct of any other duly licensed doctor of medicine or osteopathy, or any act performed by any duly licensed doctor of medicine or osteopathy in the exercise of his profession.

“(d) In order to familiarize physicians with the review functions and activities of Professional Standards Review Organizations and to promote acceptance of such functions and activities by physicians, patients, and other persons, each Professional Standards Review Organization, in carrying out its review responsibilities, shall (to the maximum extent consistent with the effective and timely performance of its duties and functions)—

“(1) encourage all physicians practicing their profession in the area served by such Organization to participate as reviewers in the review activities of such Organizations;

“(2) provide rotating physician membership of review committees on an extensive and continuing basis;

“(3) assure that membership on review committees have the broadest representation feasible in terms of the various types of practice in which physicians engage in the area served by such Organization; and

“(4) utilize, whenever appropriate, medical periodicals and similar publications to publicize the functions and activities of Professional Standards Review Organizations.

“(e) (1) Each Professional Standards Review Organization shall utilize the services of,



and accept the findings of, the review committees of a hospital or other operating health care facility or organization located in the area served by such organization, but only when and only to the extent and only for such time that such committees in such hospital or other operating health care facility or organization have demonstrated to the satisfaction of such organization their capacity effectively and in timely fashion to review activities in such hospital or other operating health care facility or organization (including the medical necessity of admissions, types and extent of services ordered, and lengths of stay) so as to aid in accomplishing the purposes and responsibilities described in subsection (a) (1), except where the Secretary disapproves, for good cause, such acceptance.

“(2) The Secretary may prescribe regulations to carry out the provisions of this subsection.

“(f) (1) an agreement entered into under this part between the Secretary and any organization under which such organization is designated as the Professional Standards Review Organization for any area shall provide that such organization will—

“(A) perform such duties and functions and assume such responsibilities and comply with such other requirements as may be required by this part or under regulations of the Secretary promulgated to carry out the provisions of this part; and

“(B) collect such data relevant to its functions and such information and keep and maintain such records in such form as the Secretary may require to carry out the purposes of this part and to permit access to and use of any such records as the Secretary may require for such purposes.

“(2) Any such agreement with an organization under this part shall provide that the Secretary make payments to such organization equal to the amount of expenses reasonably and necessarily incurred, as determined by the Secretary, by such organization in carrying out or preparing to carry out the duties and functions required by such agreement.

“(g) Notwithstanding any other provision of this part, the responsibility for review of health care services of any Professional Standards Review Organization shall be the review of health care services provided by or in institutions, unless such Organizations shall have made a request to the Secretary that it be charged with the duty and function of reviewing other health

care services and the Secretary shall have approved such request.

#### “NORMS OF HEALTH CARE SERVICES FOR VARIOUS ILLNESSES OR HEALTH CONDITIONS”

“Sec. 1156. (a) Each Professional Standards Review Organization shall apply professionally developed norms of care, diagnosis, and treatment based upon typical patterns of practice in its regions (including typical lengths of stay for institutional care by age and diagnosis) as principal points of evaluation and review. The National Professional Standards Review Council and the Secretary shall provide such technical assistance to the organization as will be helpful in utilizing and applying such norms of care, diagnosis, and treatment. Where the actual norms of care, diagnosis, and treatment in a Professional Standards Review Organization area are significantly different from professionally developed regional norms of care, diagnosis, and treatment approved for comparable conditions, the Professional Standards Review Organization concerned shall be so informed, and in the event that appropriate consultation and discussion indicate reasonable basis for usage of other norms in the area concerned, the Professional Standards Review Organization may apply such norms in such area as are approved by the National Professional Standards Review Council.

“(b) Such norms with respect to treatment for particular illnesses or health conditions shall include (in accordance with regulations of the Secretary)—

“(1) the types and extent of the health care services which, taking into account differing, but acceptable, modes of treatment and methods of organizing and delivering care are considered within the range of appropriate diagnosis and treatment of such illness or health condition, consistent with professionally recognized and accepted patterns of care;

“(2) the type of health care facility which is considered, consistent with such standards, to be the type in which health care services which are medically appropriate for such illness or condition can most economically be provided.

“(c) (1) The National Professional Standards Review Council shall provide for the preparation and distribution, to each Professional Standards Review Organization and to each other agency or person performing review



functions with respect to the provision of health care services under this Act, of appropriate materials indicating the regional norms to be utilized pursuant to this part. Such data concerning norms shall be reviewed and revised from time to time. The approval of the National Professional Standards Review Council of norms of care, diagnosis, and treatment shall be based on its analysis of appropriate and adequate data.

"(2) Each review organization agency, or person referred to in paragraph (1) shall utilize the norms developed under this section as a principal point of evaluation and review for determining, with respect to any health care services which have been or are proposed to be provided, whether such care and services are consistent with the criteria specified in section 1155 (a) (1).

"(d) (1) Each Professional Standards Review Organization shall—

"(A) in accordance with regulations of the Secretary, specify the appropriate points in time after the admission of a patient for inpatient care in a health care institution, at which the physician attending such patient shall execute a certification stating that further inpatient care in such institution will be medically necessary effectively to meet the health care needs of such patient; and

"(B) require that there is included in any such certification with respect to any patient such information as may be necessary to enable such organization properly to evaluate the medical necessity of the further institutional health care recommended by the physician executing such certification.

"(2) The points in time at which any such certification will be required (usually, not later than the 50th percentile of lengths-of-stay for patients in similar age groups with similar diagnoses) shall be consistent with and based on professionally developed norms of care and treatment and data developed with respect to length of stay in health care institutions of patients having various illnesses, injuries, or health conditions, and requiring various types of health care services or procedures.

#### "SUBMISSION OF REPORTS BY PROFESSIONAL STANDARDS REVIEW ORGANIZATIONS"

"Sec. 1157. If, in discharging its duties and functions under this part, any Professional Standards Review Organization determines that

any health care practitioner or any hospital, or other health care facility, agency, or organization has violated any of the obligations imposed by section 1160, such organization shall report the matter to the Statewide Professional Standards Review Council for the State in which such organization is located together with the recommendations of such Organization as to the action which should be taken with respect to the matter. Any Statewide Professional Standards Review Council receiving any such report and recommendation shall review the same and promptly transmit such report and recommendation to the Secretary together with any additional comments or recommendations thereon as it deems appropriate. The Secretary may utilize a Professional Standards Review Organization, in lieu of a program review team as specified in sections 1862 and 1866, for purposes of subparagraph (C) of section 1862 (d) (1) and subparagraph (F) of section 1866 (b) (2).

#### "REQUIREMENT OF REVIEW APPROVAL AS CONDITION OF PAYMENT OF CLAIMS"

"Sec. 1158. (a) Except as provided for in section 1159, no Federal funds appropriated under any title of this Act (other than title V) for the provision of health care services or items shall be used (directly or indirectly) for the payment, under such title or any program established pursuant thereto, of any claim for the provision of such services or items, unless the Secretary, pursuant to regulation determines that the claimant is without fault if—

"(1) the provision of such services or items is subject to review under this part by any Professional Standards Review Organization, or other agency; and

"(2) such organization or other agency has, in the proper exercise of its duties and functions under or consistent with the purposes of this part, disapproved of the services or items giving rise to such claim, and has notified the practitioner or provider who provided or proposed to provide such services or items and the individual who would receive or was proposed to receive such services or items of its disapproval of the provision of such services or items.

"(b) Whenever any Professional Standards Review Organization, in the discharge of its duties and functions as specified by or pursuant to this part, disapproves of any health care services or



items furnished or to be furnished by any practitioner or provider, such organization shall, after notifying the practitioner, provider, or other organization or agency of its disapproval in accordance with subsection (a), promptly notify the agency or organization having responsibility for acting upon claims for payment for or on account of such services or items.

#### **"HEARINGS AND REVIEW BY SECRETARY"**

"Sec. 1159. (a) Any beneficiary or recipient who is entitled to benefits under this Act (other than title V) or a provider or practitioner who is dissatisfied with a determination with respect to a claim made by a Professional Standards Review Organization in carrying out its responsibilities for the review of professional activities in accordance with paragraphs (1) and (2) of section 1155 (a) shall, after being notified of such determination, be entitled to a reconsideration thereof by the Professional Standards Review Organization and, where the Professional Standards Review Organization reaffirms such determination in a State which has established a Statewide Professional Standards Review Council, and where the matter in controversy is \$100 or more, such determination shall be reviewed by professional members of such Council and, if the Council so determined, revised.

"(b) Where the determination of the Statewide Professional Standards Review Council is adverse to the beneficiary or recipient (or, in the absence of such Council in a State and where the matter in controversy is \$100 or more), such beneficiary or recipient shall be entitled to a hearing thereon by the Secretary to the same extent as is provided in section 205 (b), and, where the amount in controversy is \$1,000 or more, to judicial review of the Secretary's final decision after such hearing as is provided in section 205 (g). The Secretary will render a decision only after appropriate professional consultation on the matter.

"(c) Any review or appeals provided under this section shall be in lieu of any review, hearing, or appeal under this Act with respect to the same issue.

#### **"OBLIGATIONS OF HEALTH CARE PRACTITIONERS AND PROVIDERS OF HEALTH CARE SERVICES; SANCTIONS AND PENALTIES; HEARINGS AND REVIEW"**

"Sec. 1160. (a) (1) It shall be the obligation

of any health care practitioner and any other person (including a hospital or other health care facility, organization, or agency) who provides health care services for which payment may be made (in whole or in part) under this Act, to assure that services or items ordered or provided by such practitioner or person to beneficiaries and recipients under this Act—

"(A) will be provided only when, and to the extent, medically necessary; and

"(B) will be of a quality which meets professionally recognized standards of health care; and

"(C) will be supported by evidence of such medical necessity and quality in such form and fashion and at such time as may reasonably be required by the Professional Standards Review Organization in the exercise of its duties and responsibilities; and it shall be the obligation of any health care practitioner in ordering, authorizing, directing, or arranging for the provision by any other person (including a hospital or other health care facility, organization, or agency), of health care services for any patient of such practitioner, to exercise his professional responsibility with a view to assuring (to the extent of his influence or control over such patient, such person, or the provision of such services) that such services or items will be provided—

"(D) only when, and to the extent, medically necessary; and

"(E) will be of a quality which meets professionally recognized standards of health care.

"(2) Each health care practitioner, and each hospital or other provider of health care services, shall have an obligation, within reasonable limits of professional discretion, not to take any action, in the exercise of his profession (in the case of any health care practitioner), or in the conduct of its business (in the case of any hospital or other such provider), which would authorize any individual to be admitted as an inpatient in or to continue as an inpatient in any hospital or other health care facility unless—

"(A) inpatient care is determined by such practitioner and by such hospital or other provider, consistent with professionally recognized health care standards, to be medically necessary for the proper care of such individual; and

"(B) (i) the inpatient care required by such individual cannot, consistent with such



standards, be provided more economically in a health care facility of a different type; or

(ii) (in the case of a patient who requires care which can, consistent with such standards, be provided more economically in a health care facility of a different type) there is, in the area in which such individual is located, no such facility or no such facility which is available to provide care to such individual at the time when care is needed by him.

“(b) (1) If after reasonable notice and opportunity for discussion with the practitioner or provider concerned, any Professional Standards Review Organization submits a report and recommendations to the Secretary pursuant to section 1157 (which report and recommendations shall be submitted through the Statewide Professional Standards Review Council, if such Council has been established, which shall promptly transmit such report and recommendations together with any additional comments and recommendations thereon as it deems appropriate) and if the Secretary determines that such practitioner or provider, in providing health care services over which such organization has review responsibility and for which payment (in whole or in part) may be made under this Act has—

“(A) by failing, in a substantial number of cases, substantially to comply with any obligation imposed on him under subsection (a), or

“(B) by grossly and flagrantly violating any such obligation in one or more instances, demonstrated an unwillingness or a lack of ability substantially to comply with such obligations, he (in addition to any other sanction provided under law) may exclude (permanently for such period as the Secretary may prescribe) such practitioner or provider from eligibility to provide such services on a reimbursable basis.

“(2) A determination made by the Secretary under this subsection shall be effective at such time and upon such reasonable notice to the public and to the person furnishing the services involved as may be specified in regulations. Such determination shall be effective with respect to services furnished to an individual on or after the effective date of such determination (except that in the case of institutional health care services such determination shall be effective in the manner provided in title XVIII with respect to terminations of provider agreements),

and shall remain in effect until the Secretary finds and gives reasonable notice to the public that the basis for such determination has been removed and that there is reasonable assurance that it will not recur.

“(3) In lieu of the sanction authorized by paragraph (1), the Secretary may require that (as a condition to the continued eligibility of such practitioner or provider to provide such health care services on a reimbursable basis) such practitioner or provider pay to the United States, in case such acts or conduct involved the provision or ordering by such practitioner or provider of health care services which were medically improper or unnecessary, an amount not in excess of the actual or estimated cost of the medically improper or unnecessary services so provided, or (if less) \$5,000. Such amount may be deducted from any sums owing by the United States (or any instrumentality thereof) to the person from whom such amount is claimed.

“(4) Any person furnishing services described in paragraph (1) who is dissatisfied with a determination made by the Secretary under this subsection shall be entitled to reasonable notice and opportunity for a hearing thereon by the Secretary to the same extent as is provided in section 205 (b), and to judicial review of the Secretary's final decision after such hearing as is provided in section 205 (g).

“(c) It shall be the duty of each Professional Standards Review Organization and each Statewide Professional Standards Review Council to use such authority or influence it may possess as a professional organization, and to enlist the support of any other professional or governmental organization having influence or authority over health care practitioners and any other person (including a hospital or other health care facility, organization, or agency) providing health care services in the area served by such review organization, in assuring that each practitioner or provider/referred to in subsection (a) providing health care services in such area shall comply with all obligations imposed on him under subsection (a).

#### “NOTICE TO PRACTITIONER OR PROVIDER”

“Sec. 1161. Whenever any Professional Standards Review Organization takes any action or makes any determination—

“(a) which denies any request, by a health



care practitioner or other provider of health care services, for approval of a health care service or item proposed to be ordered or provided by such practitioner or provider; or

“(b) that any such practitioner or provider has violated any obligation imposed on such practitioner or provider under section 1160, such organization shall, immediately after taking such action or making such determination, give notice to such practitioner or provider of such determination and the basis therefor, and shall provide him with appropriate opportunity for discussion and review of the matter.

#### “STATEWIDE PROFESSIONAL STANDARDS REVIEW COUNCILS; ADVISORY GROUPS TO SUCH COUNCILS”

“Sec. 1162. (a) In any State in which there are located three or more Professional Standards Review Organizations, the Secretary shall establish a Statewide Professional Standards Review Council.

“(b) The membership of any such Council for any State shall be appointed by the Secretary and shall consist of—

“(1) one representative from and designated by each Professional Standards Review Organization in the State;

“(2) four physicians, two of whom may be designated by the State medical society and two of whom may be designated by the State hospital association of such State to serve as members on such Council; and

“(3) four persons knowledgeable in health care from such State whom the Secretary shall have selected as representatives of the public in such State (at least two of whom shall have been recommended for membership on the Council by the Governor of such State).

“(c) It shall be the duty and function of the Statewide Professional Standards Review Council for any State, in accordance with regulations of the Secretary, (1) to coordinate the activities of, and disseminate information and data among the various Professional Standards Review Organizations within such State including assisting the Secretary in development of uniform data gathering procedures and operating procedures applicable to the several areas in a State (including, where appropriate, common data processing operations serving several or all areas) to assure efficient operation and objective evaluation of comparative performance of the sev-

eral areas and, (2) to assist the Secretary in evaluating the performance of each Professional Standards Review Organization, and (3) where the Secretary finds it necessary to replace a Professional Standards Review Organization, to assist him in developing and arranging for a qualified replacement Professional Standards Review Organization.

“(d) The Secretary is authorized to enter into an agreement with any such Council under which the Secretary shall make payments to such Council equal to the amount of expenses reasonably and necessarily incurred, as determined by the Secretary, by such Council in carrying out the duties and functions provided in this section.

“(e) (1) The Statewide Professional Standards Review Council for any State (or in a State which does not have such Council, the Professional Standards Review Organizations in such State which have agreements with the Secretary) shall be advised and assisted in carrying out its functions by an advisory group (of not less than seven nor more than eleven members) which shall be made up of representatives of health care practitioners (other than physicians) and hospitals and other health care facilities which provide within the State health care services for which payment (in whole or in part) may be made under any program established by or pursuant to this Act.

“(2) The Secretary shall by regulations provide the manner in which members of such advisory group shall be selected by the Statewide Professional Standards Review Council (or Professional Standards Review Organizations in States without such Councils).

“(3) The expenses reasonably and necessarily incurred, as determined by the Secretary, by such group in carrying out its duties and functions under this subsection shall be considered to be expenses necessarily incurred by the Statewide Professional Standards Review Council served by such group.

#### “NATIONAL PROFESSIONAL STANDARDS REVIEW COUNCIL”

“Sec. 1163. (a) (1) There shall be established a National Professional Standards Review Council (hereinafter in this section referred to as the ‘Council’) which shall consist of eleven physicians, not otherwise in the employ of the United States, appointed by the Secretary without regard to the provisions of title 5, United



States Code, governing appointments in the competitive service.

"(2) Members of the Council shall be appointed for a term of three years and shall be eligible for reappointment.

"(3) The Secretary shall from time to time designate one of the members of the Council to serve as Chairman thereof.

"(b) Members of the Council shall consist of physicians of recognized standing and distinction in the appraisal of medical practice. A majority of such members shall be physicians who have been recommended by the Secretary to serve on the Council by national organizations recognized by the Secretary as representing practicing physicians. The membership of the Council shall include physicians who have been recommended for membership on the Council by consumer groups and other health care interests.

"(c) The Council is authorized to utilize and the Secretary shall make available, or arrange for, such technical and professional consultative assistance as may be required to carry out its functions, and the Secretary shall, in addition, make available to the Council such secretarial, clerical and other assistance and such pertinent data prepared by, for, or otherwise available to, the Department of Health, Education, and Welfare as the Council may require to carry out its functions.

"(d) Members of the Council, while serving on business of the Council, shall be entitled to receive compensation at a rate fixed by the Secretary (but not in excess of the daily rate paid under GS-18 of the General Schedule under section 5332 of title 5, United States Code), including travel time; and while so serving away from their homes or regular places of business, they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code, for persons in Government service employed intermittently.

"(e) It shall be the duty of the Council to—

"(1) advise the Secretary in the administration of this part;

"(2) provide for the development and distribution, among Statewide Professional Standards Review Councils and Professional Standards Review Organizations of information and data which will assist such review councils and organizations in carrying out their duties and functions;

"(3) review the operations of Statewide Professional Standards Review Councils and Professional Standards Review Organizations with a view to determining the effectiveness and comparative performance of such review councils and organizations in carrying out the purposes of this part; and

"(4) make or arrange for the making of studies and investigations with a view to developing and recommending to the Secretary and to the Congress measures designed more effectively to accomplish the purposes and objectives of this part.

"(f) The National Professional Standards Review Council shall from time to time, but not less often than annually, submit to the Secretary and to the Congress a report on its activities and shall include in such report the findings of its studies and investigations together with any recommendations it may have with respect to the more effective accomplishment of the purposes and objectives of this part. Such report shall also contain comparative data indicating the results of review activities, conducted pursuant to this part, in each State and in each of the various areas thereof.

#### "APPLICATION OF THIS PART TO CERTAIN STATE PROGRAMS RECEIVING FEDERAL FINANCIAL ASSISTANCE"

"Sec. 1164. (a) In addition to the requirements imposed by law as a condition of approval of a State plan approved under any title of this Act under which health care services are paid for in whole or part, with Federal funds, there is hereby imposed the requirement that provisions of this part shall apply to the operation of such plan or program.

"(b) The requirement imposed by subsection (a) with respect to such State plans approved under this Act shall apply—

"(1) in the case of any such plan where legislative action by the State legislature is not necessary to meet such requirement, on and after January 1, 1974; and

"(2) in the case of any such plan where legislative action by the State legislature is necessary to meet such requirement, whichever of the following is earlier—

"(A) on and after July 1, 1974, or

"(B) on and after the first day of the calendar month which first commences more than ninety days after the close of the first



regular session of the legislature of such State which begins after December 31, 1973.

**“CORRELATION OF FUNCTIONS  
BETWEEN PROFESSIONAL STANDARDS  
REVIEW ORGANIZATIONS AND  
ADMINISTRATIVE  
INSTRUMENTALITIES”**

“Sec. 1165. The Secretary shall by regulations provide for such correlation of activities, such interchange of data and information, and such other cooperation consistent with economical, efficient, coordinated, and comprehensive implementation of this part (including, but not limited, to usage of existing mechanical and other data-gathering capacity) between and among—

“(a) (1) agencies and organizations which are parties to agreements entered into pursuant to section 1816, (2) carriers which are parties to contracts entered into pursuant to section 1842, and (3) any other public or private agency (other than a Professional Standards Review Organization) having review or control functions, or proved relevant data-gathering procedures and experience, and

“(b) Professional Standards Review Organizations, as may be necessary or appropriate for the effective administration of title XVIII, or State plans approved under this Act.

**“PROHIBITION AGAINST  
DISCLOSURE OF INFORMATION”**

“Sec. 1166. (a) Any data or information acquired by any Professional Standards Review Organization, in the exercise of its duties and functions, shall be held in confidence and shall not be disclosed to any person except (1) to the extent that may be necessary to carry out the purposes of this part or (2) in such cases and under such circumstances as the Secretary shall by regulations provide to assure adequate protection of the rights and interests of patients, health care practitioners, or providers of health care.

“(b) It shall be unlawful for any person to disclose any such information other than for such purposes, and any person violating the provisions of this section shall, upon conviction, be fined not more than \$1,000, and imprisoned for not more than six months, or both, together with the costs of prosecution.

**“LIMITATION ON LIABILITY FOR  
PERSONS PROVIDING INFORMATION,  
AND FOR MEMBERS AND EMPLOYEES  
OF PROFESSIONAL STANDARDS  
REVIEW ORGANIZATIONS, AND FOR  
HEALTH CARE PRACTITIONERS  
AND PROVIDERS”**

“Sec. 1167. (a) Notwithstanding any other provision of law, no person providing information to any Professional Standards Review Organization shall be held, by reason of having provided such information, to have violated any criminal law, or to be civilly liable under any law, of the United States or of any State (or political subdivision thereof) unless—

“(1) such information is unrelated to the performance of the duties and functions of such Organization, or

“(2) such information is false and the person providing such information knew, or had reason to believe, that such information was false.

“(b) (1) No individual who, as a member or employee of any Professional Standards Review Organization or who furnishes professional counsel or services to such organization, shall be held by reason of the performance by him of any duty, function, or activity authorized or required of Professional Standards Review Organizations under this part, to have violated any criminal law, or to be civilly liable under any law, of the United States or of any State (or political subdivision thereof) provided he has exercised due care.

“(2) The provisions of paragraph (1) shall not apply with respect to any action taken by any individual if such individual, in taking such action, was motivated by malice toward any person affected by such action.

“(c) No doctor of medicine or osteopathy and no provider (including directors, trustees, employees, or officials thereof) of health care services shall be civilly liable to any person under any law of the United States or of any State (or political subdivision thereof) on account of any action taken by him in compliance with or reliance upon professionally developed norms of care and treatment applied by a Professional Standards Review Organization (which has been designated in accordance with section 1152 (b) (1) (A) operating in the area where such doctor of medicine or osteopathy or provider took such action but only if—

“(1) he takes such action (in the case of a health care practitioner) in the exercise of his



profession as a doctor of medicine or osteopathy (or in the case of a provider of health care services) in the exercise of his functions as a provider of health care services, and

"(2) he exercised due care in all professional conduct taken or directed by him and reasonably related to, and resulting from, the actions taken in compliance with or reliance upon such professionally accepted norms of care and treatment.

**"AUTHORIZATION FOR USE OF  
CERTAIN FUNDS TO ADMINISTER  
THE PROVISIONS OF THIS PART"**

"Sec. 1168. Expenses incurred in the administration of this part shall be payable from—

"(a) funds in the Federal Hospital Insurance Trust Fund;

"(b) funds in the Federal Supplementary Medical Insurance Trust Fund; and

"(c) funds appropriated to carry out the health care provisions of the several titles of this Act; in such amounts from each of the sources of funds (referred to in subsections (a), (b), and (c) as the Secretary shall deem to be fair and equitable after taking into consideration the costs attributable to the administration of this part with respect to each of such plans and programs.

**"TECHNICAL ASSISTANCE TO  
ORGANIZATIONS DESIRING TO BE  
DESIGNATED AS  
PROFESSIONAL STANDARDS  
REVIEW ORGANIZATIONS"**

"Sec. 1169. The Secretary is authorized to provide all necessary technical and other assistance (including the preparation of prototype plans of organization and operation) to organizations described in section 1152(b)(1) which—

"(a) express a desire to be designated as a Professional Standards Review Organization; and

"(b) the Secretary determines have a potential for meeting the requirements of a Professional Standards Review Organization; to assist such organizations in developing a proper plan to be submitted to the Secretary and otherwise in preparing to meet the requirements of this part for designation as a Professional Standards Review Organization.

# Rondomycin<sup>®</sup>

## (methacycline HCl)

**CONTRAINDICATIONS:** Hypersensitivity to any of the tetracyclines.

**WARNINGS:** Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

**Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

**Usage in newborns, infants, and children.** (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

**PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

**ADVERSE REACTIONS:** **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

**Skin:** maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

**Renal toxicity:** rise in BUN, apparently dose related (See **WARNINGS**).

**Hypersensitivity:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

**Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**USUAL DOSAGE: Adults**—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

**Children**—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

**Concomitant therapy:** Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

**SUPPLIED:** 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73

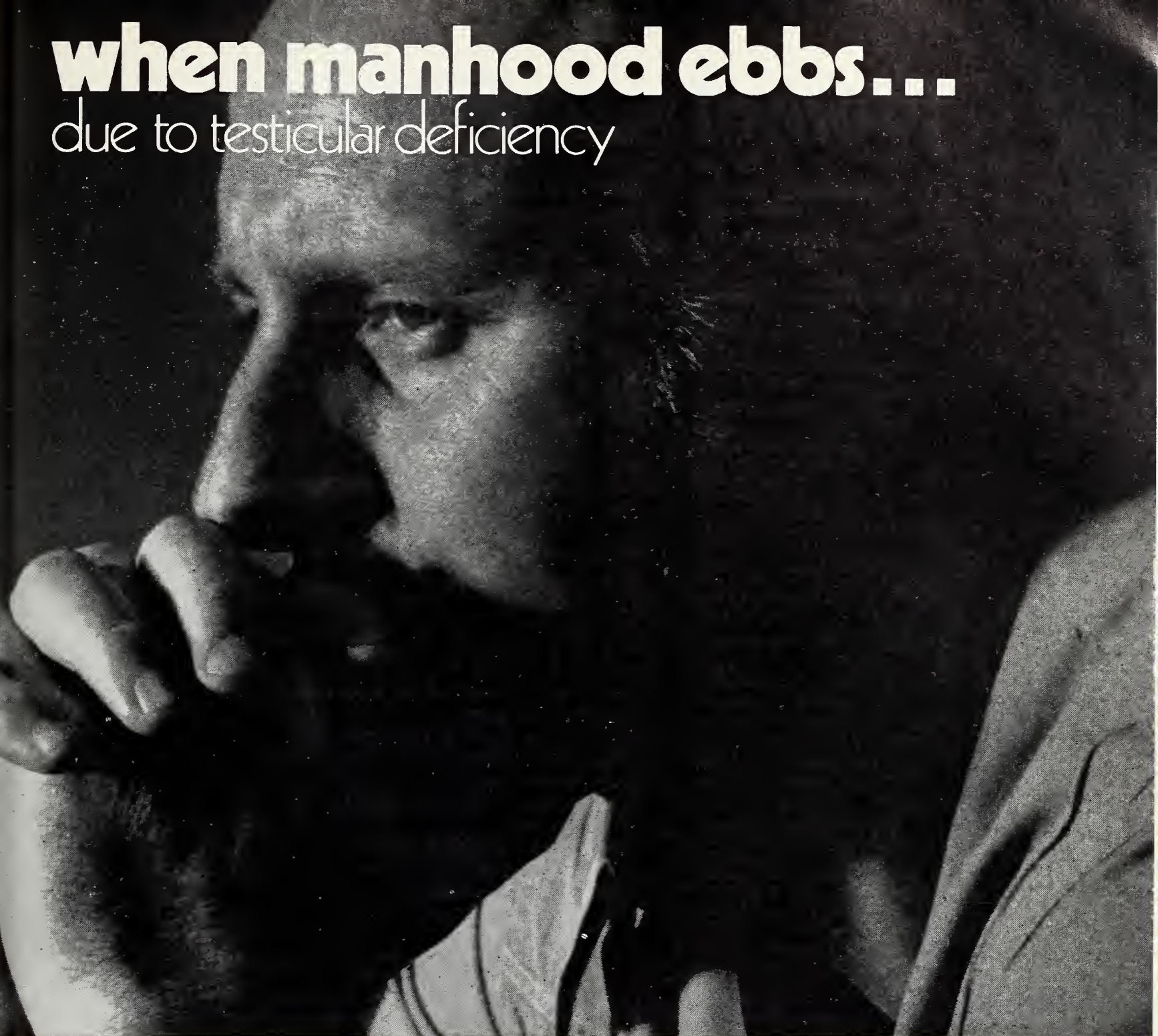


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(fluoxymesterone Tablets, U.S.P., Upjohn)

**Indications in the male:** Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration: 1. Primary eunuchoidism and eunuchism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Those symptoms of panhypopituitarism related to hypogonadism. 4. Impotence due to androgen deficiency. 5. Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

**In the female:** 1. Prevention of postpartum breast manifestations of pain and engorgement. 2. Palliation of androgen-responsive

advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

**Contraindications:** Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

**Warnings:** Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

**Precautions:** Patients with cardiac, renal or hepatic derangement may retain sodium and water thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced

ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

**Adverse Reactions:** Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

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For additional product information, see your Upjohn representative or consult the package circular.

J-3262-4 MED B-6-S (MAH)

\*Cecil-Loeb. Textbook of Medicine, Vol. II, ed. 13. Beeson, P. B. and McDermott, W. eds. Philadelphia, W. B. Saunders Co., 1971, p. 1816.

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#### INSTRUCTIONS TO CONTRIBUTORS

Manuscripts submitted for consideration for publication in the JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION should be addressed to the Editor, John B. Thomison, M.D., P.O. Box 70, Nashville, Tennessee 37202.

Manuscripts must be typewritten on one side of letterweight paper. Either double or triple spacing and wide margins must be provided to facilitate editing which will be legible for the printer. The pages should be numbered and clipped or stapled together, but they should not be placed in a binder.

Bibliographic references should not exceed twenty in number documenting key publications. They should appear at the end of the paper. The bibliographic references must conform to the style used in the American Medical Association publications, as,—Alais, FG: What is Known About it, J. Tennessee M. A., 35:132, 1950.

Illustrations should be numbered and identified with the author's name. The editor will determine the number, if any, of illustrations to be used with the Journal assuming the cost of engravings and cuts up to \$25. Engraving cost for illustrations in excess of \$25 will be billed to the author. They will not be returned unless specifically requested.

If reprints are wanted, the desired number should be indicated in the letter accompanying the manuscript. No reprints are provided free and a reprint cost schedule will be forwarded upon request.



## Laboratory Improvement Program

JOHN K. DUCKWORTH, M.D.\*

Independent and hospital laboratories have long been subject to outside proficiency standards established by the Center for Disease Control (CDC) in Atlanta and their own state departments of health. Commercial laboratories doing business across state lines are also subject to strict federal standards of control. Recently, legislation in California, Arizona, and Maryland has made it mandatory for physicians' office laboratories in those states to participate in proficiency testing.

Much has been said but very little documented about the reliability of laboratory tests performed in the physician's office. Now there is available a program which cannot only document the reliability of laboratory tests in the doctor's office, but will also provide a mechanism for a sustained laboratory improvement effort. This program is called the PEP (Proficiency Evaluation Program), which is sponsored by the College of American Pathologists. The American Society of Internal Medicine has called the program "a valuable aid in managing office laboratories, a valuable aid in assuring the quality results that are so vital to patient care."

Participation is confidential and, excluding office labs in California, Arizona, and Maryland, entirely voluntary. Physicians who participate in the program are sent unknown samples for testing and instructions for their laboratory personnel. The results obtained by the office lab personnel are sent to a data processing center where the findings are matched and compared with those obtained for performing the same

tests by other laboratories and reference labs. A confidential report based on this comparison is returned to the subscribing physician.

This program offers the physician an inexpensive system for monitoring the capabilities of his office laboratory, providing instructions and materials in easy-to-use form. It allows the physician to evaluate specific tests, reagents, and instruments for accuracy and precision. In addition, it provides confidential data which compares the performance of a laboratory with a peer group, composed of other participating laboratories performing the same tests. As a result, it should assist the physician in managing his laboratory techniques and personnel and assure him of quality test reports. It should help to maintain high standards of patient care.

This year the TMA is promoting a subscription to the program; *subscription must occur prior to JANUARY 15, 1974*. Test materials and instructions for personnel are sent to the physician's attention at regular intervals throughout the year.

Data accumulated in the program are for the exclusive use of subscribers, and anonymity of individual participants is scrupulously maintained. Statistics obtained are published only in the forms guaranteed to subscribers or designated medical groups for individual or group quality control and laboratory management purposes.

Educational supplements are sent to all participants periodically during the year to keep them updated on developments in the program.

In addition, subscribers to the program receive a personalized certificate for reference or display purposes evidencing dedication to high standards of quality assurance in the laboratory.

\*Director of Laboratories, Methodist Hospital, Memphis, and Chairman of the Tennessee Medical Association Committee on Blood Banks and Medical Laboratories.



This program is similar in concept to existing programs which have been conducted for large clinical and hospital laboratories for several years. It offers a mini-program for the physician's office laboratory, utilizing the experience from the decade of proficiency testing conducted in larger laboratories. It represents a purely volunteer program. The information obtained will be used to plan educational programs to correct deficiencies that might become apparent. Recently the State of Oklahoma has experienced a four-fold increase in the number of physicians participating since the initiation of the program in 1968. Oklahoma has learned that, in general, the quality of laboratory work in the physician's office is better than expected. However, certain areas of poor performance were identified. Specifically, in the areas of bacteriology, blood calcium determinations, and uric acid analysis, poor performance became apparent.

Seminars on quality control procedures for the doctors' office laboratories have been conducted as a result of the Oklahoma program. Of 1,176 reported results which included chemistry, hematology, immuno-hematology, and bac-

teriology specimens, 79 percent were in the good performance range with only 12.7 percent being technically unacceptable and 5.7 percent medically misleading.

Specimens are sent to subscribing physicians throughout the year, and fall in one of the four major categories: hematology, chemistry, urinalysis, and bacteriology. The fee for the service is \$115 per year.

Information can be obtained from the College of American Pathologists, 230 North Michigan Avenue, Chicago, Illinois 60601.

**YOU ARE URGED TO CONSIDER ENROLLING!!**

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\* \* \*

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# *Hospital Discharge Planning: A Hospital's Responsibility to the Patient and the Community*

JERRY C. COLLIER, MSSW\*

Quality discharge planning with the assurance of continuity of health care has become an integral goal of community hospitals. More interest is being demonstrated in health maintenance as hospitals have moved from the treatment of diagnoses to the treatment of the whole person.

In the past, health care facilities have been "apart from" rather than "a part of" a community. It is paradoxical that today, while health care facilities are striving to become a viable part of communities, cultural changes have set a segment of our population apart from the community by over utilizing nursing homes (both unskilled and skilled), boarding homes and institutions.

Society has undergone a tremendous cultural change. A move from an agrarian to an industrial age has caused an emigration of the young from the rural areas. This has resulted in a breakdown of the family structure as we once knew it—smaller dwellings, smaller family units and more emphasis placed upon materialism has replaced the three-generation family unit that was once the hub and work force of our country.

This move toward urbanization and industrialization with all the inherent demands made on an upward mobile society has set aside the "non-productive" group of our population—the elderly and the chronically disabled.

In the state of Tennessee the 1970 Bureau of the Census reported that 9.8 percent of the citizens of Tennessee were 65 years of age or older. Numerically, this represents approximately 400,000 people. The Bureau of Health Statistics has projected that ten percent (40,000) of these people will require some level of long-term health care. In addition to this number, there are 76,567 people who receive disability benefits either from the Department of Public Welfare or from Social Security. Thus, over 100,000 people may require either assistance with activities of daily living, assistance with physical

mobility, or total care and supervision due to severe disability or illness.

At one time people were dependent upon and responsible for each other. Today, they are dependent upon organized health care to assume former family and community responsibilities.

Physicians, nurses, and administrators are charged with responsibility not only of rendering quality care to hospitalized patients, but also of assessing the social/psychological factors of each patient who will need teaching in self care and assistance in maintaining an optimum level of health once he's discharged from the hospital. The rationale is in the area of prevention, i.e., to reduce the unnecessary rehospitalization of patients. This can be accomplished only through effective, realistic discharge planning.

The question raised by many of the health professions concerns time. So many demands are placed upon physicians, nurses and administrators it is not feasible to expect them to counsel with patients and families, and make multi-contacts with agencies and representatives of the community in addition to their other responsibilities.

The Tennessee Hospital Association is attempting to set up effective discharge planning mechanisms through their Medical Social Work Shared Services Program. The focus of the social services in the participating hospitals is to begin the discharge planning of patients as soon after admission as possible. This is accomplished through the organization of a discharge planning team and a community service council. The hospital-based social worker serves as a liaison between the two on behalf of the patient.

The Discharge Planning Team usually consists of nursing supervisors, a dietitian and a social worker, and where available, the physical therapist, respiration therapist and chaplain. The team meets weekly and any number may refer a patient for discussion and suggestions. Goals are set for post-hospitalization care of the patient. At subsequent meetings the progress

\* Social Work Consultant to the Tennessee Hospital Association.



toward D-(Discharge) Day of previously referred patients is reported until the patient has been discharged. This type of planning has proved to be an excellent way of improving the horizontal communications between professions. It is also a good teaching tool to acquaint team members with the total patient. Because of the time factor, the attending physician does not formally meet with the committee, but is kept informed both verbally and through written reports. Minutes of each meeting are kept and a copy is forwarded to the Utilization and Review Committee.

The social worker is also a member of a newly formed community service council. The council generally meets monthly. The utilization of community resources is vitally important to a hospital-based social worker in planning for the home health care of patients. Although there are frequent one-to-one contacts between the social worker and appropriate resources, it is felt that a structured committee enhances the communications between members and reduces overutilization and duplication of services. The organization of the council has served to clarify roles and services of each member. Generally, one week prior to the regular meeting the council members submit the name(s) they wish to discuss with a brief statement of the problem. Each member is asked to contribute any knowledge he might have. During the meeting, the cases are discussed and suggestions are made to resolve the problem. By working as a group much more can be accomplished in a shorter length of time.

Although the community hospital has been instrumental in establishing these councils, the emphasis is on assisting people in the community—not just patients. There is, however a direct relationship between the community service council and the Hospital Discharge Planning Team when a patient is discussed. The Community Council recommendations can be reported to the Discharge Planning Team by the social worker or a member(s) of the council can serve as an ad hoc member to the team. This gives a two-way positive rapport between hospital and community.

Post-hospitalization discharge planning does take time and the knowledge, skill and teamwork of all involved parties. It must be remembered, however, that the most important team members are the patient and his family. Effective planning is a preventive measure that can serve

to stabilize a person's state of health and well-being and can allow him to remain in his own community environment. It can also serve to lessen the burden on responsible family members.

Quality discharge planning and continuity of health care are examples of the community hospital's awareness of their responsibility to their citizens.

\* \* \*

## **"ROUTINE ORDERS for MEDICAL AND SURGICAL EMERGENCIES"**

**by  
Timothy A. Lamphier, M.D. F.A.C.S.**

*Revolutionary in Concept  
Avoid Malpractice Suits*

Foreword by  
Herbert D. Adams, M.D.  
Former President  
Lahey Clinic Foundation

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# *Reconstructive Surgery of Lower Extremity Injuries\**

W. M. COCKE, M.D.

The reconstructive surgeon can salvage the viable but massively injured extremities on which amputation would be the first thought. The principles of treatment are: (1) to place the extremity in a normal or near normal position and immobilize it; (2) to debride all non-viable tissue, and (3) to replace all of the tissue which has been lost or destroyed. Each case represents a specific problem and the solution to the problem has to be individualized. The orthopedic surgeon uses traction devices, ex-

ternal fixation, internal fixation, or a combination of these to immobilize the extremity. Once the extremity has been immobilized and all the non-viable tissue has been debrided, the reconstructive surgeon can then replace the lost tissue. Pictorial case reports will illustrate the free graft, the local pedicle flap, the regional pedicle flap, and distant flap on an arm carrier as methods used to repair a massively injured lower extremity.

Case #1 (Figs. 1, 2) illustrates a child's foot which has been run over by an automobile causing necrosis of all of the soft tissue of the



FIG. 1



FIG. 2

\*Presented at the Plastic Surgery Section, Tennessee Medical Association Meeting, April 13, 1972, Gatlinburg, Tennessee.



dorsum of the foot as well as a fracture dislocation of the ankle. There is exposed tendon and bone. This open wound was controlled by multiple debridements, and closed by using a thin split graft, thus converting the wound from an open, contaminated wound to a closed, clean wound. (The thinner the graft the better the take.) This graft can then be replaced with a thicker, better quality of skin graft at a later time. (The thicker the graft the better the appearance.)

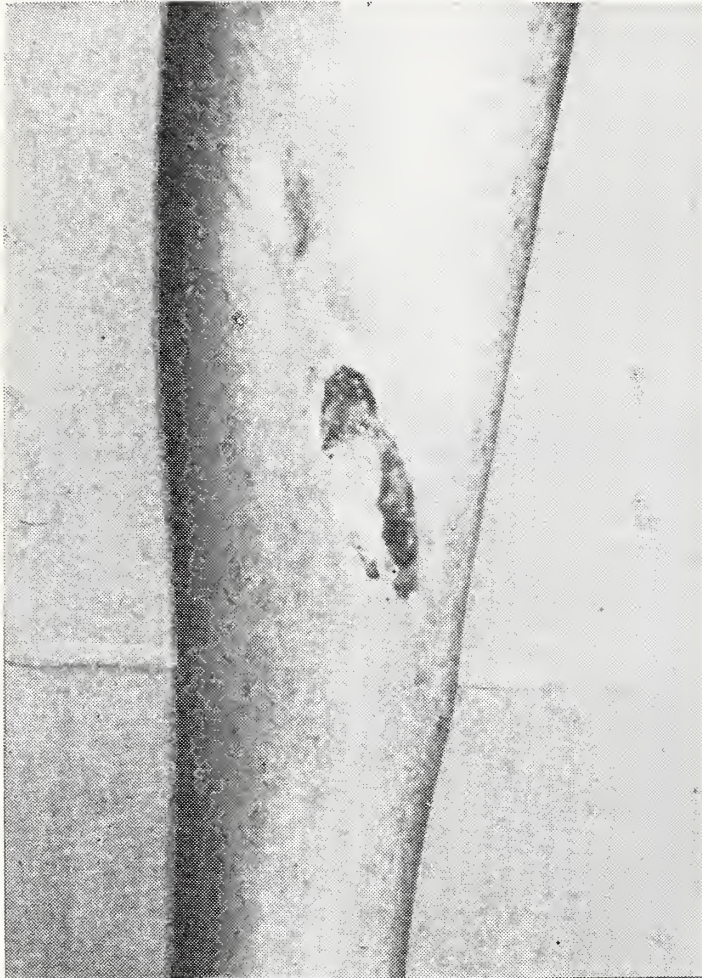


FIG. 3

Case #2 (Figs 3, 4) illustrates a compound tibial fracture. This fracture was reduced and held by compression plate fixation. The soft tissue loss was replaced by shifting a bipedicle flap over the wound and closing the flap donor site with a skin graft. When possible local tissue should be used for flap closure as it is technically less difficult and much better tolerated by the patient.

Case #3 (Figs. 5, 6) illustrates a patient who has a massive tissue injury to the lower leg in which local tissue would not provide ample soft tissue coverage. A cross thigh flap is useful in injuries such as this. The patient's leg is crossed over the opposite thigh and the skin and sub-



FIG. 4

cutaneous tissue are elevated from this thigh and placed over the wound. A period of three to four weeks is necessary to allow the new blood supply to develop at which time the flap is divided from the donor thigh. A skin graft is used to close the flap donor site.

Occasionally an extremity is so severely injured that a skin graft, local flap or regional flap will not work. (Fig. 7) In such cases (Case #4) tissue has to be mobilized from



FIG. 5





FIG. 6

distant sources. One method is to design and elevate a large pedical flap from the abdomen and attach this to the wrist. (Figs. 8, 9) The abdominal flap will pick up its blood supply from the arm. The flap can then be divided from the abdomen and moved on the arm "carrier" to the lower extremity where it is

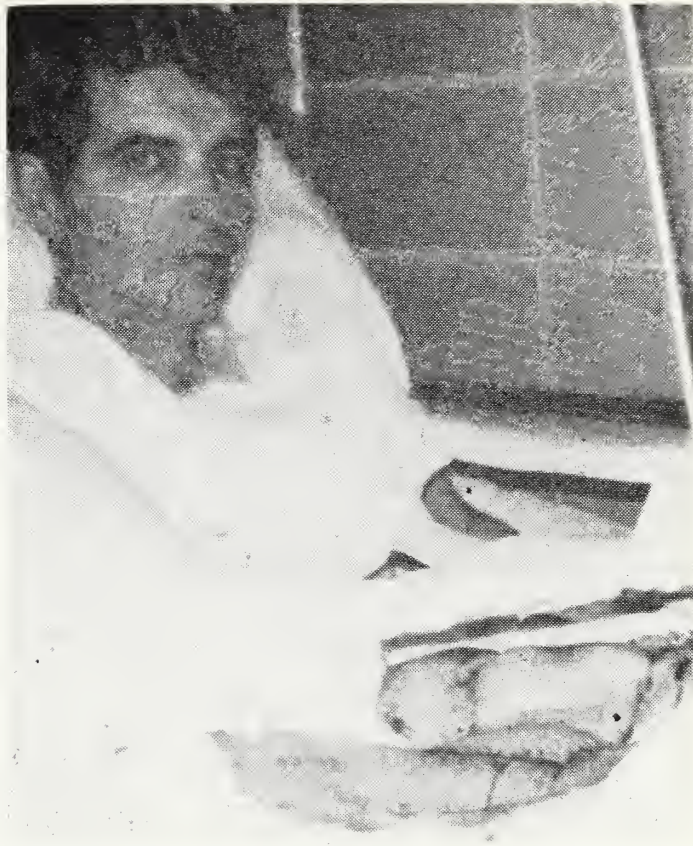


FIG. 9

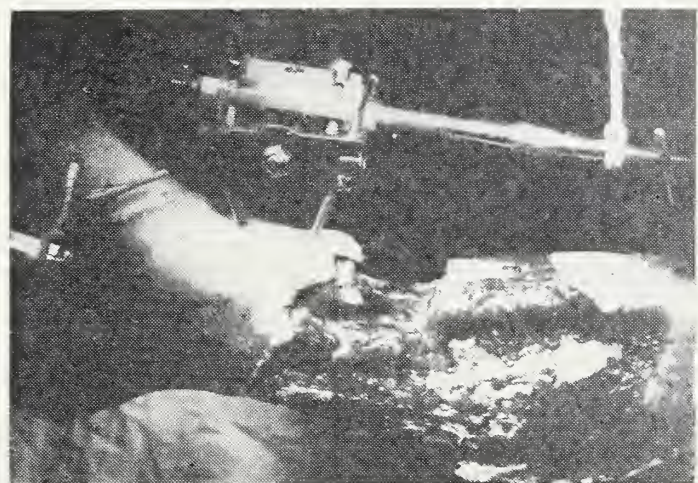


FIG. 7

inset over the defect. (Fig. 10.) After it has been vascularized from the leg, it is then divided from the arm. This process takes approximately 4-6 weeks to accomplish, but is indicated when large blocks of tissue are needed to close a large defect.

Case #5 also represents a similar problem involving a large tissue loss and loss of the use of the knee joint. Prosthetic replacement of the knee joint has been accomplished under this pedicle tissue.

There are occasions when amputation is definitely indicated, but every conceivable effort should be made to salvage and reconstruct the massively injured lower extremity.



FIG. 8

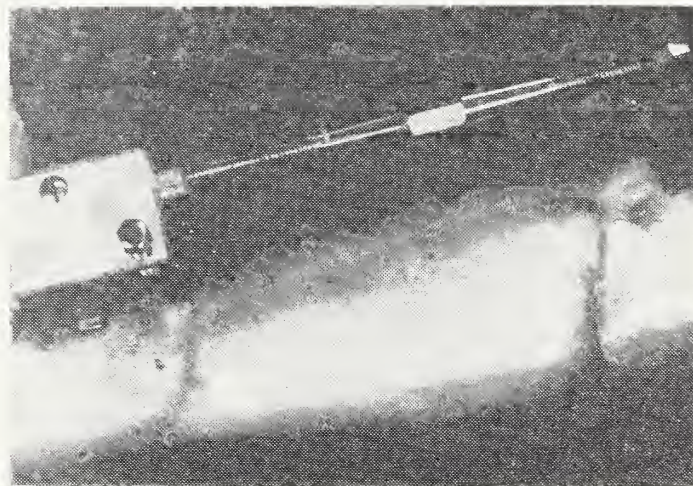


FIG. 10



# The Healthy Male Carrier Of the Gonococcus

F. L. ROBERTS, M.D.\* AND SUMNER GLASSCO, B.S.\*\*

The ubiquitous gonococcus has been with us for untold centuries. The disease it produces was known to Hippocrates four hundred years before Christ. The name, "Gonorrhea," from the Greek, meaning a "flow of seed" was given the disease by Galen in the first century A.D. The writers of the Old Testament knew the disease which they referred to as "an issue."

In 1376, John Adern,<sup>1</sup> surgeon to Richard II and Henry IV, wrote the first description of a disease in all respects equivalent to the disease, gonorrhea. Gonorrhea was given to the American Indians in exchange for syphilis (or "Indian measles").

John Hunter<sup>1</sup> in 1767 made a very unfortunate experiment in which he inoculated himself with pus from a gonorrhea case to observe the course of the untreated disease. Unfortunately, the pus also contained spirochetes and Hunter taught that untreated gonorrhea became syphilis. So great was his reputation that this misbegotten experiment of his set back the study of gonorrhea and syphilis for more than 100 years. It was not until 1860 that Ricord separated the two diseases. In 1879, Neisser<sup>1</sup> identified the causative organism.<sup>†</sup>

## ASYMPTOMATIC MALES

Recently a new and disturbing factor has been introduced into the picture—the healthy male

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†Ricord is given the honor of separating gonorrhea from syphilis. But in the opinion of the writers this honor should go to Benjamin Bell of Scotland. In his book published in 1795, "Treatise on Gonorrhea Virulenta and Lues Venerea," he clearly distinguishes between gonorrhea and syphilis. He says, "At present, it is only necessary to observe, that Gonorrhea consists of a discharge of puriform matter from the urethra; which, even by those who support the contrary opinion, is now admitted to be in almost every instance, a local infection, and that it very rarely contaminates the general habit of body; while Lues Venerea is a disease of the constitution, arising from the absorption of venereal virus from any part of the surface of the body, but most frequently from the genitals." (edited to reflect modern spelling).

carrier of virulent gonococci. Pariser<sup>2</sup> reported asymptomatic males with positive gonococcal cultures. He stated these might be classed as carriers because of the long incubation period but apparently these cases were treated when diagnosed.

The male carriers in the Memphis-Shelby County Health Department were discovered by "happenstance." Until 1970, the department did not routinely interview gonorrheally infected women. In the first place, the department did not have the personnel to do it and the information in many cases was highly suspect. In 1970 with increased facilities, the staff began interviewing all women who had positive gonorrhea cultures.

Considerable difficulty was encountered in getting many of the male contacts in for examination because they claimed nothing was wrong with them. Male contacts to these culturally positive women were separately interviewed as to date of exposure. Table I shows the results of the examination of the 314 male contacts.

Examined	Number	Percent
Total	314	100.0
Asymptomatic		
(Pos. cultures only)	61	19.4
No evidence of Gonorrhea	150	47.8
Clinical Gonorrhea	103	32.8

Table 1—Results of the examination of 314 male contacts to gonorrheally culture positive women.

Since this table was prepared, more than 100 additional asymptomatic males have been found. On 32 of these the Department was able to get accurate information (by separate interviews) concerning dates of exposure and all 32 had more than 21 days incubation period. These 32 are tabulated in Table 2.

All of these patients were asymptomatic and culturally positive. For example, three had been asymptomatic for 21 days and 1 had been asymptomatic for 276 days.

It is felt that these men can be classified as carriers. It is possible but highly improbable that *all* of these patients had been exposed in the week preceding the culture.



<i>Days Between Exposure and Time of 1st Culture</i>	<i>No. of Patients</i>	<i>No. of Asymptomatic days by No. of Patients</i>
21-27	12	21(3) 22,23,24,25(4) 27(2)
28-47	8	31,33,34,37,40,42,45, 47
48-100	5	57,61,73,74,77
101-276	7	101,104,108,140,157, 188,276

Table 2—Distribution of 32 male patients with reference to number of days between exposure and time of 1st culture.

<i>Patient No.</i>	<i>No. of Weeks Asymptomatic</i>	<i>Notes</i>
1	5	Tired of regimen. Treated 6th week. No symptoms of GC.
2	15-18	Spontaneous cure. (No treatment)
3	2	Spontaneous cure. One year later had positive culture but no treatment.
4	10	Spontaneous cure.
5	9	Developed discharge positive GC in the 9th week.
6	19	Tired of monastic life. Treated in 10th week. One year later was again an asymptomatic carrier.
7	4	Spontaneous cure. Neg. one year later.
8	6	Tired of regimen. Treated 6th week. Neg. 1 year later.
9	11	Tired of regimen. Treated. 1 year later was asymptomatic carrier.
10	6-8	Tired of regimen. Treated. 1 year later was asymptomatic with positive culture.
11	10	Tired of regimen. Treated. Neg. one year later.
12	6	Lost to study.
13	6	Spontaneous cure.
14	16	Tired of regimen. He and wife treated at same time. Neg. 1 year later.

Table 3—Details of 14 patients studied in depth.

To provide further support for the argument that there are male carriers of the gonococcus, an in depth study of 14 of these asymptomatic

patients was conducted. It was explained to each patient that he had hidden gonorrhea. The subjects were asked to cooperate by coming in each week for a culture and by foregoing women and alcohol during the experiment. They were further told that they would receive treatment at any time they requested it.

Table 3 gives details of these 14 individual cases.

The research indicates that all cases represented carriers of the gonococcus. They also prove a truism that gonorrhea is a self-limited disease. Five of these 14 patients were spontaneously cured. There were 3 cases on which comment might prove of interest.

Patient #1: Was exposed on 3-15-71. Was asymptomatic with positive urethral cultures for 10 weeks following exposure (6 were in clinic). At his request, after 10 weeks, he was treated. He had a positive culture and was asymptomatic on day of treatment.

Patient #2: This patient had no discharge and no dysuria for 15 weeks following exposure. After the 5th week in the clinic he had consistently negative cultures and had had no treatment. Spontaneous cure.

Patient #8: Exposed 3-31-71. Had positive cultures and was completely asymptomatic for six weeks. At his request, he was treated at the end of six weeks. He was asymptomatic at time of treatment. Had positive culture and was asymptomatic 1 year later.

Each of these patients was carefully questioned at each visit. The staff was satisfied that they had received no treatment and some cases had eschewed alcohol, but the lack of sexual contacts could not be determined with certainty. It is interesting that not one woman since this study began has named any of these patients as a sexual partner except the original case.

A researcher from the Center for Disease Control conducted a special study of the colonies grown from these 14 patients and determined that all were of either type 1 or 2—that is, virulent gonococci—(defining “virulent” as the ability to produce disease.)

- These patients were questioned closely as to:
- (1) Any medication of any sort from any source in the past six months.
  - (2) Previous history of gonorrhea.
  - (3) History of pneumonia, meningitis or rheumatic fever, (diseases for which they may have received large doses of penicillin).

*To question 1*—One patient had sulfa drugs for 2 days, 2 months prior to 1st visit. One patient had penicillin 1 month



prior to entrance, apparently, for infected piles.

*To question 2*—Only 3 of the 14 had ever had clinical gonorrhea and none of these within 1 year of time of 1st visit to clinic.

*To question 3*—One patient had pneumonia 9 years previous to 1st visit.

Statistically, to prove that there are healthy male carriers of the gonococcus *one* demonstrated case is all that is needed. The study indicates that patients 2,4,9 and 11 would satisfy the most stringent criteria of "carrier". A carrier does not have to carry the organisms throughout life.

### CASE HISTORY

As an interesting aside: a businessman in Michigan read of this work and came to Memphis in October of 1972. In 1970, he had contracted gonorrhea at a convention. At the time, his wife was in the hospital and remained there 6 weeks. He was treated and pronounced cured and has been checked several times since. For about six months before he read of the Memphis study, his wife had not been well. The gynecologist refused to do a culture on her on the basis that the husband was all right and his urologist assured him he was all right but *nobody* cultured him. He thought he might be a carrier and came down to see. He was a carrier—had been for at least 18 months and was not diagnosed. We treated him and outlined treatment for his wife. He returned one week later for test-of-cure and his cultures were negative. His wife also had negative cultures. He phoned the clinic later to say her health had improved considerably in the past two weeks.

### CONCLUSION

There are some theoretical reasons for the assumption that all of these patients had not been exposed to gonorrhea recently. This clinic has determined that approximately 25 percent of prostitutes have gonorrhea and that approximately 50 percent of single exposures to a gonorrheally infected woman will result in gonorrhea. Thus, the probability that a man would develop gonorrhea from any one prostitute is 12.5 percent. If 12.5 percent is the true infection rate it is highly improbable that all these 14 men would have contracted the disease during the study period.

These studies supplementing those of Pariser<sup>2</sup> and others have proved conclusively that there are healthy male carriers of virulent gonococci. The true rate of asymptomatic male gonorrhea is unknown—but an educated guess would put it very near 15 percent of contacts. In 314 in-

dividuals it was determined that 61 or 20 percent is the true percentage in the sample. If the true percentage is 15 then one would expect to find between 35 and 60 cases. However, in this instance some 61 cases were found which would indicate that the true percentage is between 15 and 20.

The implications of these findings are not entirely known, but these men—15 to 20 percent of those exposed to gonorrhea—are certainly important factors in the spread of gonorrhea and must be recognized and treated.

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## Salt Losing Nephritis In the Prune Belly Syndrome\*

The absence of abdominal musculature described by Froelich in 1839<sup>1</sup> was associated with hydronephrosis, megalocystis, and undescended testes by Parker in 1895.<sup>2</sup> To date, 160 cases have been reported,<sup>1,3,4</sup> but the renal salt loss resembling adrenal insufficiency reported first by Thorn<sup>5</sup> has not been reported in patients with the syndrome.

We have observed an infant with the classical manifestations of the Prune Belly Syndrome who developed such a salt-losing disease at 7½ months of age. At necropsy, renal tubular dilatation and chronic infection were demonstrated. It is felt, therefore, that chronic infection and obstruction precluded normal sodium reabsorption in this infant.

### CASE REPORT

S.L.M. was born to a 16 y.o. gravida 1, para 0 black female following an eight month gestation. Pregnancy was reportedly normal. Labor, delivery, and the onset of respirations proceeded without complications. Birth weight was 6 pounds and 2 ounces. Congenital absence of the abdominal musculature, bilateral cryptorchidism, and a patent urachus were noted at birth. A regimen of urinary antisepsis with nitrofurantoin was begun at that time.

The infant was first readmitted for a urinary tract infection at five months of age. He responded favorably to antibiotic treatment during that admission.

At seven months, the infant was readmitted for the second and final time for re-evaluation of urinary tract infection, evaluation of renal function, and for consideration for urinary diversion. Pertinent physical findings on that admission were a temperature of 98.6° F., blood pressure 60 mmHg (flush), respirations 60 per-min, pulse 144 per-min. He weighed 10 lbs. 1 oz. and was 60 cm in length. A head circumference of 42cm and a chest circumference of 36 cm were recorded. He was moderately dehydrated. He had a mild pectus excavatum, clear lungs, and a normal cardiac examination. There was a characteristic "prune belly" appearance with easy palpation of all abdominal viscera. A patent urachus drained cloudy, yellow urine. The phallus was normal, but there was bilateral cryptorchidism. There was no clinical evidence of rickets.

\* Supported by Daland Fellowship Grant of the American Philosophical Society, 299005 9846R72.

Laboratory studies on admission revealed an hematocrit of 33.0 Vol%, hemoglobin of 11.7 gms.%, a WBC of 10,700 with 42% segmented neutrophils, 1% eosinophils, and 57% lymphocytes. A suprapubic bladder aspiration revealed a cloudy urine with a pH of 6.5, specific gravity 1.008, 250-450 white blood cells/h.p.f. and 3+ bacteria. Gram-negative rods were observed on the gram stain. The culture of this urine grew *Pseudomonas aeruginosa*, sensitive to polymyxin, gentamicin, and carbenicillin. Urine collected from the urachus also cultured *Pseudomonas aeruginosa*.

Admission chemistries revealed a BUN of 32 mgm%, serum sodium of 111 mEq/L, potassium 6.9 mEq/L, chloride 80 mEq/L, serum bicarbonate of 12 mEq/L glucose 105 mgm%. Intravenous fluids were begun. In twenty-four hours, 80 mEq. of sodium and 40 mEq. of potassium were administered, and 75 mEq. of sodium and 35 mEq. of potassium were excreted. After 2 milligrams of desoxycorticosterone acetate, 80 mEq. of sodium and 40 mEq. of potassium were administered, 75 mEq. of sodium and 35 mEq. of potassium were again excreted over the twenty-four hours. The serum sodium remained low, but the potassium fell to normal levels during this period.

An acute ammonium chloride load (6 grams/m<sup>2</sup>) failed to acidify the urine below pH 6.0. A six-hour water deprivation study revealed a maximum urinary osmolality of 597 milliosmoles per kilogram. Creatinine clearance was 22.4 ml/min/1.73 m<sup>2</sup>. An intravenous pyelogram and voiding cystourethrogram revealed marked bilateral hydronephrosis with vesico-ureteral reflux and a patent urachus.

After therapy with intravenous 3% sodium chloride, carbenicillin, and gentamicin, the urinary sodium excretion fell to 21 mEq/day, and the infant rapidly became normoelectrolytemic. Despite combination gentamicin and carbenicillin therapy, however, *Pseudomonas aeruginosa* could not be eliminated from the urine.

Bilateral cutaneous ureterostomies were done to promote drainage. The infant's postoperative course, complicated by intermittent episodes of pulmonary atelectasis, was progressively downhill. Superinfection of the urinary tract with *Candida albicans* developed, and 5-fluocytosine therapy was begun. The ureterostomies drained poorly even when cannulated with indwelling catheters. The infant was found without vital signs on the thirty-third hospital day.

An autopsy revealed the classical manifestations of the Prune Belly Syndrome with absent abdominal musculature (Figure 1), bilateral hydroureters, hydronephrosis, a patent urachus, and abdominal testes that were normal on microscopic examination. Interstitial inflammation, including polymorphonuclear infiltration, was present in both kidneys as were signs of inflammation in both ureters and in the bladder. There was little renal tubular dilatation in spite of absent ureteral and scant bladder musculature. (Figures 2 and 3).

A lipoid aspiration pneumonia was felt to be the cause of death. *Hafnia* was grown from the autopsied lungs.





FIGURE 1: Appearance of the patient at 5 months of age.

### DISCUSSION

The Prune Belly Syndrome is characterized by an absence of abdominal skeletal musculature, and a deficiency of ureteral and bladder smooth muscle. These conditions lead to a flabby abdomen with urinary tract dilatation, urine retention, and subsequent chronic urinary tract infection.

To date 160 cases have been reported. Williams and Burkholder<sup>3</sup> reviewed the literature and found 120 reported cases. They added 20 of their own. Bourne and Cerny<sup>4</sup> reported six cases. Burke, Shin, and Kelalis<sup>1</sup> reported 14 cases. Of the 160 cases, 20% were stillborn, and 50% died within the first two years of life.

Introduction of the term "triad syndrome" into the literature by Nunn and Stephens<sup>6</sup> emphasized the three associated anomalies—absence of the abdominal musculature, hydronephrosis, and undescended testes. The genitourinary anomalies had been described originally ten years earlier by Eagle and Barrett.<sup>7</sup>

The marked preponderance of males affected

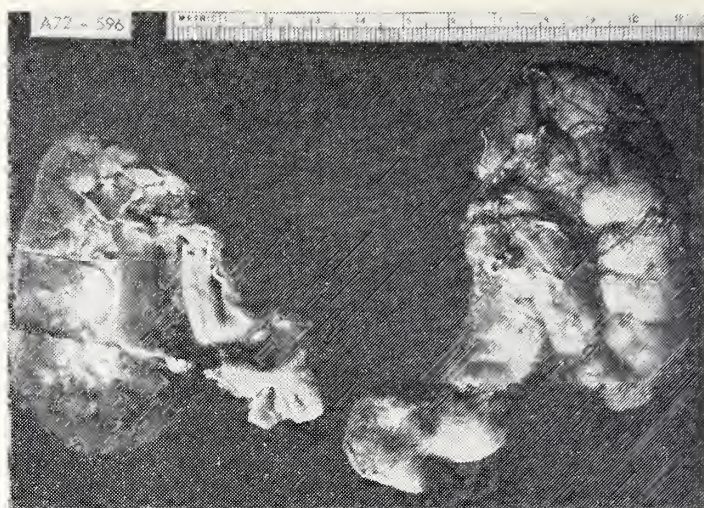


FIGURE 2: Gross appearance of hydronephrotic kidneys at autopsy.

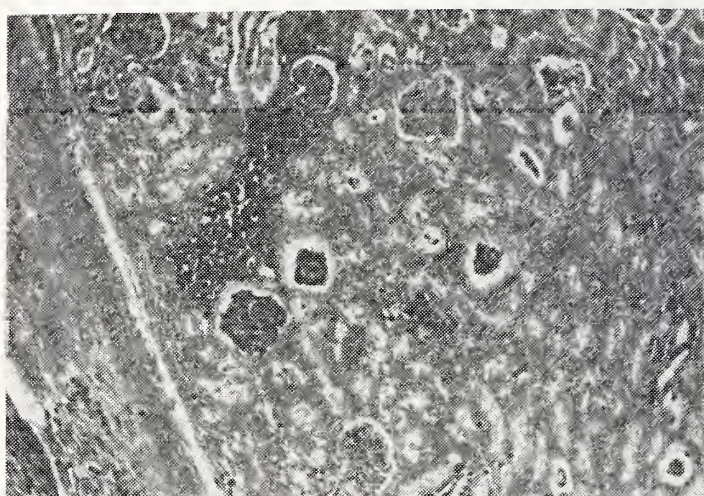


FIGURE 3: Microscopic section of the left kidney interstitial inflammation and obstruction. (H & E stain x 10).

with the syndrome has prompted several theories concerning its etiology. Bourne and Cerny<sup>4</sup> reported a case with posterior urethral valves and tried surgical resection of posterior urethral tissue with good results. They felt, therefore, that distal obstruction of the urethra in utero causes bladder distension resulting in failure of the abdominal musculature to develop. Other authors<sup>2</sup> feel, however, that the three systems involved may be subjected to maldevelopment at a critical embryological stage. Williams and Burkholder<sup>3</sup> have suggested a sex-linked recessive inheritance. A minute extrachromosomal fragment was shown in one infant with the syndrome, but examination of the blood from two phenotypically normal relatives revealed the same abnormality.<sup>8</sup>

A variety of renal lesions ranging from severe renal dysplasia to minimal parenchymal abnormalities have been associated with the syndrome. Renal functional impairment is thought to occur secondary to the functional and



anatomical obstructive uropathy and in the inevitable urinary tract infections which occur.

Urinary sodium loss is greater in chronically obstructed than in non-obstructed kidneys. Both a decreased glomerular filtration rate per nephron and a decrease in fractional salt and water reabsorption resembling the defect in chronic renal disease have been demonstrated in the canine subjects that have been studied.<sup>9</sup> In this state, it is likely that the proximal tubule is the major site of sodium loss, and mineralocorticoids have had no effect.<sup>10</sup>

Non-obstructive salt-losing nephritis has been reported in pyelonephritis, medullary cystic disease, and hereditary polycystic disease. Here the urinary sodium loss may be so marked as to resemble an Addisonian crisis. Of the cases of salt-losing nephritis previously reported, the histological lesions compatible with chronic pyelonephritis (as observed in this case) were most frequently associated.<sup>11</sup> In these cases defective proximal tubular reabsorption of sodium with oversaturation of the distal tubule were suggested by a kaluretic effect of DOCA in the absence of an appreciable sodium-retaining effect. Postulated mechanisms for this proximal tubular sodium rejection have been:

1. flattened microvilli in the proximal tubules<sup>12</sup>
2. a decreased sodium-potassium ATPase activity in proximal tubular cells<sup>13</sup>
3. a pressure phenomenon with passive sodium influx back into the tubule<sup>10</sup>
4. an osmotic effect of urea<sup>14</sup>
5. secretion of natriuretic hormone in response to urinary suppression from chronic obstruction<sup>15</sup>

It is likely that both obstructive and infectious etiologies contributed to the salt loss in this case. Its occurrence in this infant stresses the importance of observing all affected patients for the possibility of renal salt wasting. Although not previously mentioned in relation to the Prune Belly Syndrome in the current literature, salt-losing nephropathy should not be an infrequent complication of the condition.

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### CHOLECYSTOENTERIC FISTULAS WITH GALLSTONE ILEUS

John Gaston Hospital\*

UNIVERSITY OF TENNESSEE  
GRAND ROUNDS, DEPARTMENT  
OF SURGERY, MEMPHIS

DR. HARWELL WILSON: Gentlemen, the first patient this afternoon is going to be presented by Dr. B. R. Sharpton. Dr. Sharpton, would you please give us the findings on your patient?

DR. B. R. SHARPTON: The patient is a 59-year-old lady who was in her usual state of apparent good health until three days prior to admission to John Gaston Hospital, when she began to experience vague epigastric abdominal discomfort, anorexia, and malaise. Six hours later, she developed intermittent, cramping abdominal pains which began in the epigastrium and spread across her abdomen. The pains were accompanied by nausea and vomiting, producing clear, then bile-stained vomitus. The vomitus did not contain blood. She had had a normal bowel movement the day prior to but none after the onset of her symptoms. The next morning the cramping pains had subsided spontaneously, although she had residual epigastric distension and anorexia. The second evening the abdominal cramping pain resumed, again accompanied by nausea and vomiting bile-colored material. She consulted a physician who prescribed Maalox and recommended that she seek further medical advice at John Gaston Hospital. She decided instead to return home where her cramping pain subsided for several hours. During the early morning hours of the next day, the cramping pain returned for the third time, and was followed by feculent appearing vomitus with fetid odor. She gradually developed generalized abdominal pain, predominantly on the right side. At this time, she presented at John Gaston Hospital Emergency Room. The patient denied any prior history of gastrointestinal complaints, including indigestion, abdominal pain, change of bowel function, or melena. She had had no prior abdominal surgery. She denied knowledge of hernia.

Pertinent medical history revealed that she had been moderately to markedly obese all of her life. She had been treated in the past for essential hypertension, but she was not currently taking medications. She had mild symptoms suggestive of congestive heart failure including orthopnea, dyspnea on exertion, and mild intermittent pedal edema. She had noted some increased urinary frequency and nocturia without dysuria.

Physical appearance was that of an obese woman of her stated age, alert and oriented, in moderate

distress due to abdominal pain. She appeared moderately dehydrated with mild facial diaphoresis. No icterus was present. Vital signs showed the following: blood pressure 130/76, pulse 108, respirations 24, temperature 98°F. The heart was normal in size with a regular rhythm, but with a functional grade I/VI systolic murmur. There was no peripheral edema or distension of the neck veins. Peripheral pulses were intact. Retinal vessels showed arterio-venous nicking and silver wiring effect with scattered adjacent exudates. Rales were noted in the right lung base, which cleared with coughing. Her abdomen was obese and tympanitic to percussion. Bowel sounds were hypoactive and high-pitched with no rushes. Mild to moderate abdominal tenderness was noted in her right upper and both lower quadrants, but was maximum in the right lower quadrant, where involuntary guarding and rebound were present. There were no hernias, incisional scars, or pelvic or rectal masses. A small amount of normal appearing stool was present in the rectum, and guaiac test of this specimen was 2+.

Laboratory tests revealed that the hematocrit was 35%; white blood count was increased to 15,700, showing a left shift on differential, with 88% segmented forms; urinalysis was negative for glucose and had a trace of protein, pH 5.0 specific gravity 1.015, and 4-10 white cells and 3+ bacteria on microscopic exam; electrolytes were within normal limits; BUN was 44 mgm% and glucose was 325 mgm%; amylase was normal.

DR. WILSON: The presentation certainly suggests some type of bowel obstruction. Would you please present the X-ray findings?

DR. SHARPTON: The chest X-ray shows slight cardiac enlargement without pulmonary congestive changes. There is a suggestion of atelectatic changes in the right base but no active pulmonary infiltrates are seen. Flat and upright abdominal X-rays show extensive small bowel gaseous distension with air fluid levels on the upright exam. No colon gas is identifiable, and no cause for small bowel obstruction is seen.

X-ray, clinical, and laboratory findings indicated that she had a distal small bowel obstruction and probable peritonitis. Exploratory laparotomy was deemed necessary. Considered as possible etiologies were acute appendicitis with perforation, obstruction due to strangulated internal herniation or congenital bands, ileocecal carcinoma with perforation, and mesenteric vascular disease. She was also felt to have hypertensive cardiovascular disease, possible diabetes mellitus, and possible mild chronic renal insufficiency.

Preparation for surgery was instituted with intravenous hydration, monitoring of the central venous pressure and urinary output, and with intestinal decompression by nasogastric suction.

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Aqueous pencillin was added to the intravenous fluids and an initial dose of Kantrex 0.5 grams was given intramuscularly. While she was undergoing preparation for surgery it was elected to perform a barium enema exam in hopes of elucidating the etiology of the obstruction.

DR. WILSON: Dr. Sharpton, would you present the findings of the barium enema?

DR. SHARPTON: The barium enema reveals that the barium has flowed normally to the region of the hepatic flexure at which point there is a fistulous communication with the gallbladder. There is nodular irregularity of the gallbladder indicative of stones being present within the lumen. Barium then flows through the gallbladder into the second portion of the duodenum, filling the duodenal bulb and loop and the first portion of the jejunum, which is distended. No intrinsic lesions are seen in the colon or duodenum. The remainder of the colon and the terminal ileum, which are visualized with further retrograde flow, are normal. Retrospectively, on the original abdominal films a thin rim of calcium is seen in the right upper quadrant, indicative of a gallstone.

When the patient was adequately prepared she was taken to surgery by Dr. Eldred Wiser with a preoperative diagnosis of small bowel obstruction and cholecystoenteric fistulas. Suspected etiology was gallstone ileus.

DR. WILSON: Thank you Dr. Sharpton. Dr. Wiser, will you tell us about the findings in the operating room?

DR. ELDRED WISER: Exploration was carried out through a midline abdominal incision. Distended small bowel and a moderate amount of serous, inflammatory fluid was encountered in the peritoneum. The small bowel was found to be distended proximal to the mid-ileum, where a large 2.5 cm. gallstone was palpated, lying unimpacted in the bowel. Proximally, there were three areas of edema and inflammatory reaction where successive points of impaction of the gallstone had occurred. These also correlated with the episodes of cramping pain the patient related historically. The most distal area of impaction was a few inches proximal to where the gallstone lay and had an area 4 cm. in diameter of full thickness infarction without perforation of the wall of the bowel. After milking the gallstone proximally into the area of infarcted small bowel, this segment of bowel was resected. The bowel was reapproximated with an end-to-end enteroenterostomy. The re-

mainder of the small bowel was carefully palpated to exclude other stones prior to completion of the anastomosis.

Omental adhesions were noted in the region of the hepatic flexure. These were lysed; and upon releasing the hepatic flexure of the colon, a 0.5 cm. fistulous communication was found between the gallbladder and colon with a large gallstone lying within the tract. Two additional large gallstones were removed from the gallbladder. After lysing adhesions around the gallbladder, a 2.0 cm. fistulous communication from the neck of the gallbladder to the second portion of the duodenum was demonstrated. Cholecystectomy was performed. The duodenum was closed in two layers, and a duodenostomy tube was inserted for decompression. The colon was repaired in two layers and exteriorized over a glass rod. The wound was closed using retention wires.

Postoperative and final anatomical diagnoses were acute and chronic cholecystitis with cholelithiasis, cholecystoduodenal and cholecystocolic fistulization, and small bowel obstruction with focal small bowel infarction due to gallstone ileus.

Postoperatively, the patient had problems with atelectasis, nonketotic hyperglycemia, cardiac arrhythmias, and mild cardiac decompensation. She responded to medical treatment, and when bowel function had resumed on the sixth postoperative day she was placed on a progressive diet. The duodenostomy tube was removed the fifteenth postoperative day. The exteriorized colon repair has remained intact and is being allowed to recede after removal of the glass rod. She is presently twenty days postoperative, on an ADA diet, and ready for discharge.

DR. WILSON: Thank you, Dr. Wiser. All of us are well aware that the patient who has a diagnosis of intestinal obstruction is one that certainly deserves very careful attention. These patients are frequently much more seriously ill than at first appears to be the case. Dr. Cheek, I believe this patient is on your service. Will you open the discussion for us?

DR. RICHARD CHEEK: I think there are several features of this case which are of interest some of which are typical, and others atypical. First, one usually finds gallstone ileus in the elderly female patient who has not had previous abdominal surgery. Somewhere between 50% and 75% of the cases have an antecedent history compatible with gallbladder disease and chronic



cholecystitis. In addition, the progression of the present illness with gallstone ileus sometimes suggests, as it did in this patient, what has been called "tumbling obstruction," that is, early in the course of the disease, the symptoms are those of an upper small bowel obstruction. Later, as the disease progresses over hours to days, the symptoms of the obstruction are compatible with a lower small bowel obstruction.

Radiographically, the diagnosis can sometimes be suspected or made in association with a bowel obstruction by one of three criteria which have been defined. The first is the identification of stones within the intestinal tract, either by calcification or outlining the stone by gas or contrast media. The second is migration of a previously known gallstone. The third is the presence of air or contrast media in the biliary tract. The first and third of these were demonstrated in this patient.

With regards to the operative management, there are several points which should be emphasized. The first obligation is to treat the intestinal obstruction. This is usually accomplished through an enterolithotomy. An attempt should be made to move the gallstone from the position in which it is lodged, so that the enterotomy can be made through the bowel which is not damaged by erosion from the stone. When there is perforation or compromised blood supply of the wall of the gut, as was present in this case, the stone can be removed through the resection required for the gangrenous bowel. Secondly, there should be a careful search for additional stones present within the intestinal tract, because there is a definite incidence of recurrent obstruction if second or even third stones within the bowel are not discovered. Finally, the question arises as to definitive therapy for the biliary enteric fistula which is present in all cases.

DR. WILSON: Thank you, Dr. Cheek. As Dr. Cheek mentioned, perhaps more frequently when surgery is performed for intestinal obstructions secondary to gallstone ileus, one does not have occasion to treat the diseased gallbladder at the same time. In recalling an occasional intestinal obstruction of this type which I have personally taken care of, it seems to me that most of these patients have been extremely ill. The obstruction has been relieved; and then at some later time, the diseased gallbladder was removed and the fistula closed. In these cases, the incision has usually been in the lower abdomen, and the gallstone producing the obstruc-

tion has been in the lower ileum, sometimes in the pelvis. I can recall one particular patient in whom a very large stone, which could be seen on X-ray, had actually passed into the cecum. It was felt that the stone would pass without further difficulty. Strangely enough, this patient had to be operated upon several days later when this large stone became wedged in a narrow area of the sigmoid colon. In this case it would have been safer to have removed the large stone rather than to have trusted to its possible passage. Dr. Hines, would you care to comment further on this particular patient's problem?

DR. LEONARD HINES: I think that this patient certainly supports the rationale of attempting to correct the basic problem at the time of the initial surgery. With multiple gallstones being present, the potential for developing another gallstone ileus is present if the definitive procedure is delayed. It has been reported that in as many as 10% of these cases multiple episodes of gallstone ileus may occur when definitive surgery is not carried out, or other stones in the bowel are overlooked at the initial operative procedure.

An unusual manifestation in this case was the presence of double fistulas. Usually only the duodenum is involved, resulting in a cholecystoduodenal fistula. Enteric fistulization can also occur with the stomach, jejunum, ileum, or colon. A combination of these has occurred in rare instances, as was seen in this case. The presence of the cholecystocolic fistula brings up the point of management of the opening in the colon. In this case, the opening was closed in two layers and was exteriorized over a glass rod. The repair held up despite exteriorization. Most exteriorized repairs will break down and result in the formation of a colostomy. The fact that this repair was successful was perhaps due to the fact that the hole was less than 1 cm. in diameter.

DR. WILSON: Thank you, Dr. Hines. In his presentation Dr. Sharpton pointed out that this patient had some postoperative difficulty; certainly she appears to be in good condition at this time. I think that besides emphasizing the care which was given the patient in the operating room, Dr. Wiser, that you should tell us something about what you did for the patient with reference to her pulmonary status and also with reference to management of her fluids and the monitoring of the cardiac status. I believe that



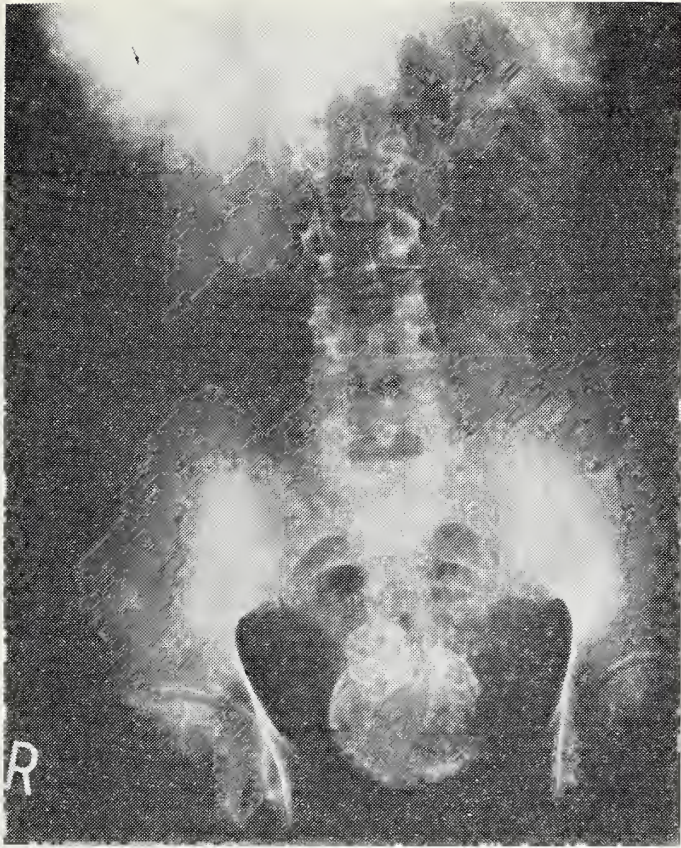


FIG. 1: Abdominal X-ray shows distended small bowel containing air, calcified uterine fibroids and a gallstone in the right upper quadrant outlined by a thin rim of calcium (arrows).

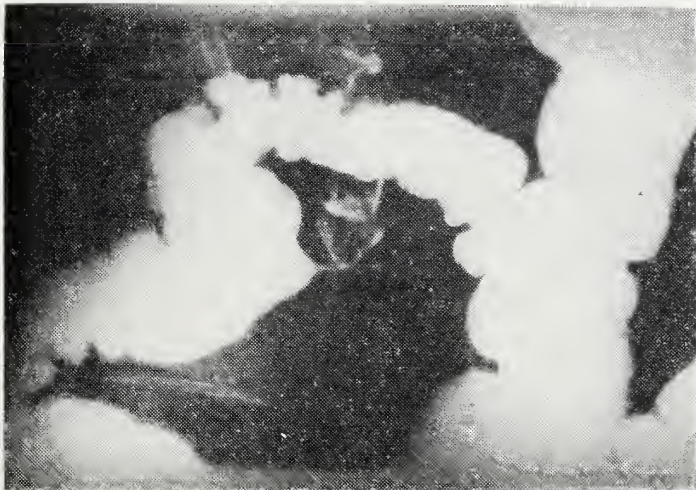


FIG. 2: Spot film of the hepatic flexure on barium enema reveals extravasation of the barium from the colon into the gallbladder with stones outlined within its lumen.

all of us are well aware that a markedly obese patient who is in poor general condition and who has such major abdominal surgery may have a number of difficulties, such as postoperative atelectasis, etc. Tell us a little more about your immediate postoperative care.

DR. WISER: Several factors, as you mentioned, were present to contribute to giving this patient increased postoperative pulmonary problems, particularly obesity, the presence of peritonitis, the extensive operative procedure,

and her precarious cardiovascular status. We anticipated pulmonary problems, and therefore left her endotracheal tube in for the first twenty-four hours postoperatively, using assisted ventilation. Her endotracheal tube was removed only after it was demonstrated by monitoring tidal volume and blood gases that she could independently ventilate and oxygenate adequately. Periodic checks of her arterial blood gases were subsequently taken, and she was given intermittent positive pressure treatments and nasotracheal suctioning until her pulmonary problems had resolved.

Her fluid management was an additional problem. Hourly urine volumes, vital signs, central venous pressures as well as periodic electrolyte determinations were obtained. Frequent clinical examinations were performed. She did manifest some evidence of cardiac decompensation by virtue of an elevated venous pressure, pulmonary rales, and decreased urinary output. The patient was digitalized and subsequently responded well. By the third postoperative day, her pulmonary and cardiovascular status were stable and she was transferred from the intensive care unit.



FIG. 3: Post evacuation barium enema shows filling of the duodenal loop and proximal jejunum with barium from the gallbladder.

*(Continued on page 1056)*



## THE SEROLOGICAL DIAGNOSIS OF INFECTIOUS MONONUCLEOSIS

The lack of firm criteria for the clinical diagnosis of infectious mononucleosis (IM) has had two major effects on serological testing for the disorder: strong reliance on the results of such tests, but some confusion regarding their interpretation. The classical disease with its typical clinical, hematological, and serological manifestations is now felt upon firm evidence to be related to Epstein-Barr virus (EBV) infection, and no other known infectious agent has so far been associated with heterophile-positive IM. The presence of agglutinins against sheep erythrocytes at a titer of 1:224 or greater, in a typical clinical setting, is considered diagnostic; sera with lower titers should be confirmed by differential absorption tests.

The currently popular and widely used slide tests for IM have largely obviated the need for the older and time-consuming Paul-Bunnell differential absorption test. These slide tests, by virtue of a variety of technical manipulations of reagents, have been made quite sensitive (generally showing positivity with sera containing sheep cell agglutinins at titers of 1:28-1:56) and do not generally show positivity even with non-specific sheep cell agglutinins present in very high titer. These facts, coupled with the speed, simplicity, and lack of expense of the slide tests, have decreased the usefulness of the classical heterophile test including differential absorption—which, however, remain the definitive serological tests in the occasional problem case.

However, there still remain "typical" clinical cases which are truly heterophile negative (up to 25% of cases in some series). Etiologically, and somewhat surprisingly, many of these have also been found to be associated with evidence of EBV infection; the cause of this seronegativity is unknown. In other cases the emergence of seropositivity is very delayed, as long as 6-8 weeks after the onset of illness. Another possible cause of seronegative IM relates to infection by agents other than EBV. Cytomegalovirus is an established cause of an IM-like illness,

especially in children; in young adults, although the hematological findings may be similar, the symptomatology frequently is atypical. Other possible etiological agents include adenovirus, herpesvirus, rubella, and Toxoplasma. The possibility of a "false negative" serological test always exists, of course, but because of the sensitivity of the slide tests and the established criteria for a positive Paul-Bunnell test, if serial studies are performed over a sufficient period of time, an actual "laboratory false negative" test must be rare indeed.

On the other hand, the "false positive" IM test (i.e., positive slide test with negative Paul-Bunnell test, or both tests positive in a patient without compatible clinical disease) is one with which any pathologist is familiar. In the latter situation, it has been shown that heterophile antibodies may persist for a few months after clinical recovery from IM, and also may show a resurgence during subsequent, usually viral, illnesses months and even years later. Also, in many instances a positive slide test will not be followed by differential absorption tests to determine whether true heterophile antibodies are present; exactly which kind of "false positive" is involved in these cases is thus hard to interpret. Various causes of false positive slide tests have been described, however, and occur almost invariably in patients with atypical clinical manifestations. Examples of disorders in which positive results on either slide tests or Paul-Bunnell tests have been reported are hepatitis, leukemias, malignant lymphomas, rubella, and even in "normal controls." There is no obvious explanation for these test results, but "atypical IM", dual infection, etc., have all been offered. The use of old outdated reagents has also been shown to cause definite "laboratory false positive" results, a fact which should always be considered in evaluation of these cases.

Thus the title of this column really refers to a nonentity, as there is no "serological diagnosis" of IM. Clinical and hematological parameters must always be considered, and confusing results must also be interpreted with knowledge of the laboratory method employed; slide tests considered "false positive" should always be followed by the complete Paul-Bunnell test. Should specific tests for EBV infection become practical for the clinical laboratory, this could be of great value in assisting in the interpretation of the confusing "false results" of serological tests for IM.

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From the Department of Pathology, Methodist Hospital, Memphis, Tenn.



# TMA X-ray of the month

This 22-month-old white male was admitted to the hospital at the request of his local health department because of failure to thrive. He was the 6 pound, 10 oz. product of a normal pregnancy, labor and delivery, and apparently developed normally for the first five to

six months. Subsequently, physical and developmental retardation were observed.

At admission, he weighed 13 pounds, 15 oz., and his height measured 31 inches. He could stand, walk, and drink from a cup only with assistance. Physical examination revealed a withdrawn, marasmic child with multiple skin bruises and excoriations, and a maculopapular rash over the anterior neck and abdomen. A right hemiparesis was also demonstrated. Laboratory studies revealed an iron deficiency anemia. The SMA-12 was normal.

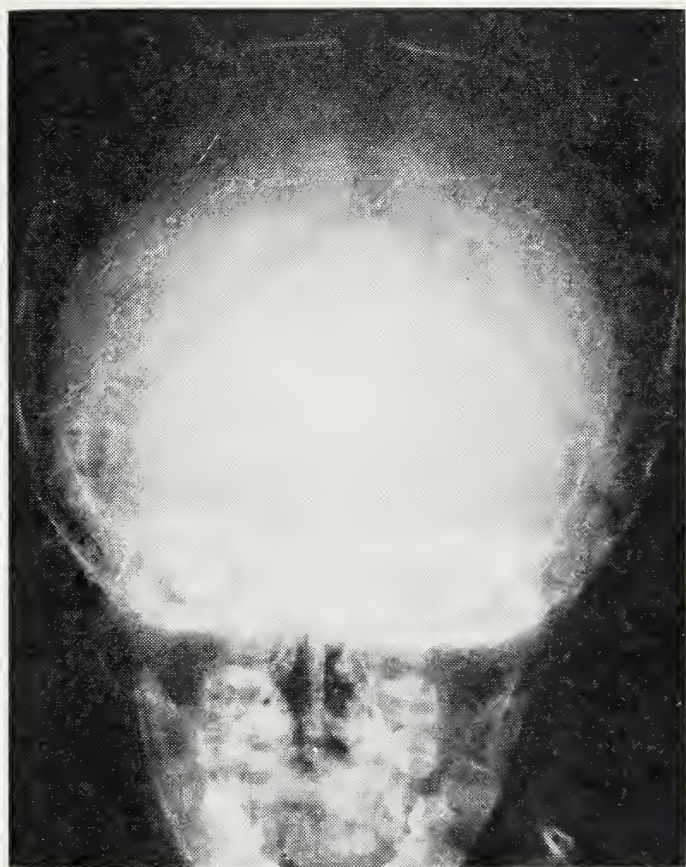


FIG. 1

## Radiographic Findings:

AP film of the skull (Figure I) showed a normal sized head with markedly widened sutures, especially the coronal and sagittal. Films of the left elbow (Figure II) revealed a healing fracture dislocation of the distal humeral metaphysis and epiphysis (Salter type II) with a fragment within the joint. Massive periosteal new bone formation was seen cloaking the distal shaft.

A skeletal series showed, in addition, fractures in different stages of healing involving the right 10th rib, the distal right humeral metaphysis, and periosteal new bone formation in the distal metaphyseal area of the right tibia. The soft tissues were markedly wasted.

A brain scan was obtained and demonstrated

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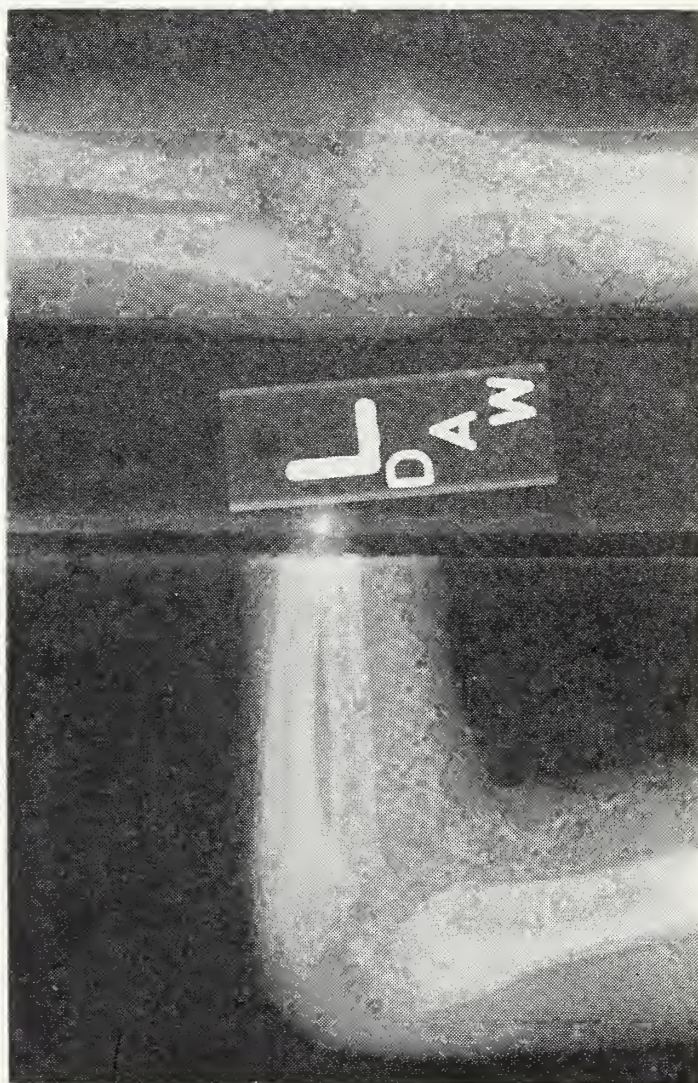


FIG. 2

findings characteristic of subdural hematoma on the right. This finding was confirmed at arteriography, and an additional smaller subdural was seen to be present on the left.

## Differential Diagnosis:

Multiple skeletal fractures of varying severity, in varying stages of healing, especially at the metaphyseal-epiphyseal location, are characteristic radiographic signs of the so-called "Battered Child Syndrome." Bilateral subdural hematomas with wide suture diastasis added credence to the radiological diagnosis.

The primary differential diagnosis of the bat-



tered child syndrome is congenital indifference to pain. This disease is characterized by a decrease or absence of pain sensation and leads to multiple fractures on that basis. Of help in differentiating this from the battered child syndrome is predominant involvement of the lower extremities, especially in a child who is just beginning to walk.<sup>1</sup>

Infantile cortical hyperostosis, the physiological periosteal reaction of the first six months of life, vitamin A intoxication, osteogenesis imperfecta, scurvy, syphilis, and the metastatic lesions of neuroblastoma and leukemia should be more easily excluded.<sup>1</sup> For instance, although periosteal new bone of varying degrees is characteristic of the first three entities, fractures would be exceedingly unusual. In osteogenesis imperfecta, osteoporosis and bowing are present and metaphyseal fractures are rare. Osteoporosis would also be a clue in the diagnosis of scurvy. The presence of metaphyseal lucent bands and the absence of metaphyseal fractures would help to exclude neuroblastoma and leukemia. Clinical information is also of great assistance in establishing the correct diagnosis in many of these conditions.

A note of caution should be added in relation to the radiographic evaluation of sutural spread in infants and young children. Until the age of 4 to 6 weeks, incomplete membranous ossification of the cranial bones adjacent to the sutures may simulate spread.<sup>2</sup> In addition, rapid brain growth between the ages of 1 to 3 years produces an appearance which is "difficult to differentiate from abnormal suture spread."<sup>2</sup> However, in this normal variant, the sagittal suture is unremarkable. Other causes of sutural spread, other than the more commonly encountered hydrocephalus and increased intracranial pressure of mass lesions, are treated deprivational dwarfism and hypothyroidism, the mechanism here being accelerated growth following a period of slower than normal growth.<sup>2</sup> Drugs such as steroids and tetracycline, excessive use of Vitamin A, and lead poisoning have also been indicted as causes of sutural diastasis, probably on the basis of increased intracranial pressure.<sup>7</sup>

#### *Final Diagnosis:*

Battered child syndrome.

#### *Clinical Course:*

Bilateral subdural collections of serosanguineous fluid were evacuated surgically. The patient

responded well to close contact with the hospital personnel and gradually increased his social activity. A 6½ pound weight gain was also accomplished during hospitalization. Although no admission of abuse could be elicited from the patient's family, it was agreed by the Child Abuse Committee and by all who had contact with the patient that he was indeed a victim of neglect and abuse. He was brought into the protective custody of the court and transferred to a foster home.

#### *Discussion:*

The first radiological description of a syndrome of child abuse came in an article by John Caffey in 1946,<sup>3</sup> wherein he described six children with subdural hematoma in association with multiple healing fractures of the long bones. He noted that there was no evidence of predisposing skeletal disease and no history of injury. Dr. Caffey suggested that the "injuries which caused the fractures in the long bones of these patients were either not observed or denied when observed."<sup>3</sup>

There was some reluctance on the part of the medical community to accept the idea of willful, physical abuse of children by parents or parent substitutes, but as more cases were published, the concept became more compelling. In 1961, Kempe coined the term "The Battered Child" for a symposium at the annual meeting of the American Academy of Pediatrics.<sup>4</sup> Since then many of the medical, social and legal ramifications of the syndrome have been clarified, and all 50 states, including Tennessee, have passed laws requiring reporting of suspected cases of child abuse.

In evaluating a child suspected of abuse, physical signs may be helpful and include burns, scratches, multiple bruises, bites and nutritional and hygienic neglect. The hallmark of the radiographic diagnosis in the battered child, as stated above, is multiple fractures of varying ages in different locations.

Metaphyseal injuries are especially common in the battered child. This is probably related to the mechanism of injury, which is twisting, shaking, and pulling,<sup>5</sup> rather than a direct blow, the latter of which results in the less common diaphyseal fractures. The epiphyseal-metaphyseal area is one of the weakest regions in a growing bone,<sup>6</sup> and since the periosteum is

*(Continued on page 1056)*



## Long-Term Medical Management Of Hypertension—An Overview

Most patients with hypertension do not have surgically correctible lesions, and for these patients long-term medical management is mandatory to decrease the risk of hypertensive complications. The therapeutic agents available fall into four classes: Diuretics, sympathetic reflex inhibiting drugs, vasodilators and beta-adrenergic blocking drugs. Fixed combinations of these drugs are generally best avoided until patient requirements are discerned.

**Diuretics:** Generally the mainstay of anti-hypertensive regimens, the oral diuretics may be all that is necessary for some patients. Those patients who have essential hypertension and low renin may be particularly responsive to diuretics alone. For other patients, additional drugs may be required but the drugs in other classes generally cause salt and water retention. Thus combination with a diuretic adds to their effectiveness and is usually necessary for adequate blood pressure control. The thiazide diuretics are the first choice of a diuretic, although furosemide may be useful in patients with renal impairment. Potassium sparing diuretics may be used in combination with thiazides to minimize potassium loss. Should potassium depletion occur, adequate replacement can be accomplished only with KCl. Other salts of potassium will not replete body stores.

**Sympathetic inhibiting drugs:** Reserpine, methyldopa and guanethidine all alter sympathetic function and thus will lower blood pressure primarily in the upright posture. *Reserpine* (*serpasil*) has marked effects on the central nervous system and may cause annoying or dangerous mental and psychic depression. For this reason, no more than 0.5 mg/day is usually recommended. At this dose, reserpine is modestly effective in decreasing blood pressure. The side effects may appear insidiously several weeks or months after starting the drug and neither doctor nor patient may link the mental changes to reserpine. Because of the side effects and limited efficacy at low dose, reserpine is not

used as widely as previously.

*Methyldopa* (*aldomet*) is more effective in lowering pressure than reserpine but shares with reserpine an ability to alter central nervous system function. This side effect usually manifests itself as sedation but depression can occur. Orthostatic hypotension is sometimes troublesome but usually less of a problem than with guanethidine. Generally, methyldopa is a very useful drug if patients can tolerate the sedation, which tends to partially disappear with time. The drug can also be given intravenously in hypertensive emergencies, which will be the topic of a separate report.

*Guanethidine* (*ismelin*) differs from reserpine and methyldopa in that mental changes are infrequent. The drug acts in the peripheral sympathetic nervous system. It is useful not only in severe hypertensives when other therapy is ineffective but also in mild to moderate hypertension when given in low doses. Side effects of orthostatic hypotension, inhibition of ejaculation, and diarrhea are related to inhibition of the sympathetic nervous system and may limit the dosage of the drug. The tricyclic antidepressants, amphetamine and the phenothiazines, will inhibit guanethidine's access to the sympathetic nervous system and thus inhibit the antihypertensive effectiveness of guanethidine. This drug/drug interaction is of extreme importance in the medical management of hypertension.

**Vasodilators:** *Hydralazine* (*apresoline*) and *diazoxide* (*Hyperstat*) are in this class. Diazoxide is reserved for hypertensive emergencies and will be covered separately. Hydralazine is also useful in hypertensive emergencies but can be used orally as well. Generally, the side effects of vasodilation include tachycardia, headache, flushing, and precipitation of angina or myocardial infarction in the presence of coronary artery disease. These side effects are minimized and effectiveness maximized by using hydralazine only in combination with a sympathetic reflex inhibitor or a beta-adrenergic blocker. In some patients hydralazine is a useful adjunctive drug to allow control of both lying and standing pressures. A unique side effect of large (> 400 mg/day) doses is a drug induced lupus

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syndrome which is usually reversible.

**Beta-adrenergic blockers:** Not yet approved by the FDA for this purpose, *propranolol (inderal)* can be effective in lowering blood pressure when used in combination with hydralazine and a thiazide or only with a thiazide. Because its use is experimental at this time, it is best reserved for patients who have inadequate control or intolerable side effects on other regimens. The combination of propranolol and hydralazine can be very effective in lowering both supine and erect blood pressure. Propranolol is also said not to cause male sexual malfunction which is

\* \* \*

### Staff Conference

(Continued from page 1051)

DR. WILSON: Thank you, Dr. Wiser. I think that this patient certainly is a very instructive one because, as mentioned in the beginning, intestinal obstruction is always a serious problem. This patient had small bowel obstruction from a relatively unusual cause, gallstone ileus, and instead of having just one fistula, the patient had a fistula not only between the duodenum and the gallbladder, but also a fistula involving the colon. As was emphasized in the discussion by Dr. Hines, since this patient had additional large stones in the gallbladder, it was important to carry out a definitive procedure in order to prevent another attack of intestinal obstruction,

\* \* \*

### X-Ray of the Month

(Continued from page 1054)

tightly attached at the epiphyseal-metaphyseal junction, fracture dislocation through the physis may result in a metaphyseal chip fracture. This latter, when seen in the face, is the classical bucket-handle fracture. Epiphyseal injuries, although not common, can lead to abnormal growth with shortening.

Another characteristic feature of this syndrome is the traumatic involucrum. This results from elevation of the loosely attached periosteum of childhood by hematoma with subsequent new bone formation and gradual resorption of hematoma.<sup>7</sup> The exuberant periosteal reactions and callus formations seen are, in all likelihood, related to the repetitive nature of the injuries.

Other areas to investigate radiographically are the skull, where frank fracture or signs of increased intracranial pressure, accompanying subdural hematoma, may be present, and the spine, where fractures are also known to occur.

Radiographic accompaniments of blunt

so common with sympathetic reflex inhibitory drugs.

In summary, there is a variety of drugs available for treatment of hypertension. It is the physician's responsibility to find the best combination of drugs to give adequate blood pressure control with best patient acceptance. Since compliance is a necessity for life-time management, side effects of drugs are extremely important. Only by carefully using the available drugs, often in combination, will good medical management be possible.

ALAN S. NIES, M.D.

which might have occurred in the relatively early postoperative period, if not later.

(Ed. Note: This patient had diabetes mellitus diagnosed at the time of admission. Frequently nonketotic hyperglycemia is one of the first indications that diabetes is present. It is rare for gallstone rupture of the biliary tree to occur in a non-diabetic. The mortality rate following emergency surgery for acute complications of cholelithiasis in diabetic patients has been reported to be 15 to 20%, or four-to-five times as great as that for a similar group of nondiabetic patients. (Turrell, E. L., et al: *Am. J. Surg.*, 102, 184, 1961) In a group of diabetics studied at Massachusetts General Hospital the postoperative complication rate was 51%. (Mundth, E.D.: *New Eng. J. Med.*, 59, 812, 1963) The results reported in this Staff Conference demonstrate the excellent treatment given to this patient at John Gaston Hospital. ABS)

\* \* \*

trauma, such as contusions and lacerations of the viscera in the abdomen and chest, should also be sought.

SANDRA G. KIRCHNER, M.D.

YING T. LEE, M.D.

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## HISTORY

The patient is a 37-year-old housewife who had been asymptomatic until eight months prior to admission when she began to notice shortness of breath with mild exertion. She developed a cough with intermittent hemoptysis. Shortness of breath became progressively worse in spite of treatment with digitalis and Lasix therapy. She developed two pillow orthopnea and was unable to continue to do her housework. There had been no history of symptoms resembling rheumatic fever in childhood or young adulthood. There is no family history of heart disease. She had no other illnesses of note. On admission to the hospital she was noted to be a well developed, healthy appearing woman. Examination of the chest revealed no rales or rhonchi. Examination of the heart revealed the arterial pulses to be of normal contour and amplitude in all four extremities. There was a modest left peristernal heave.

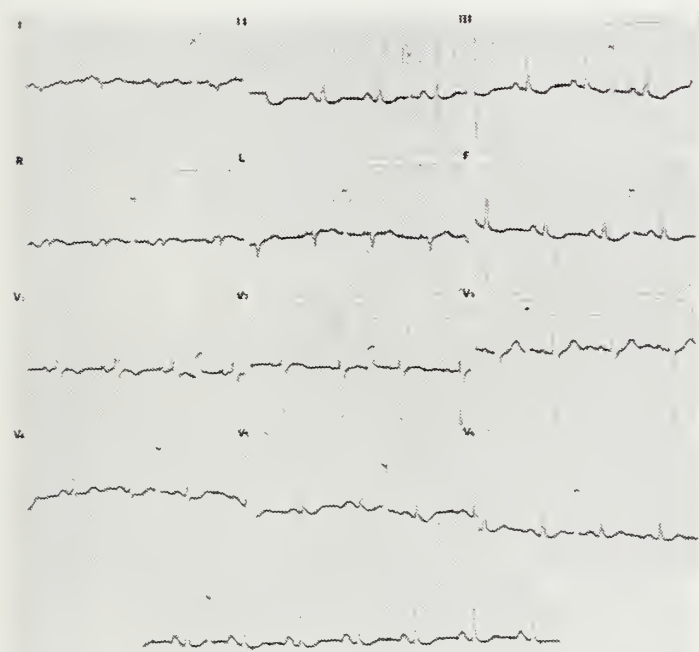


FIG. 1

## DISCUSSION

The pre-operative electrocardiogram (Fig. 1) shows mild right axis deviation (note S wave in I and R III taller than R II) compatible with mild right ventricular enlargement. The anterior forces are not prominent (small R wave in  $V_1$  and  $V_2$ ). The P waves are broad, biphasic and terminally inverted in  $V_1$  suggesting left atrial enlargement. There are nonspecific ST-T wave changes which are quite compatible with the

From the St. Thomas Hospital, Department of Cardiology, Nashville, Tenn. 37203.

There were no palpable thrills. On auscultation the first heart sound at the apex was normal to slightly increased in intensity. The second sound at the base of the heart was physiologically split with a moderately accentuated pulmonic closure sound. There was a grade I-II/VI holosystolic murmur present at the apex which radiated into the mid axillary line. A grade III, rather long diastolic rumble was present at the apex. No opening snap was audible. The following electrocardiogram was obtained. (Fig. 1)

The patient underwent right and left heart catheterization. She was found to have mild to moderate mitral insufficiency with a noncalcified, but rather severely stenotic mitral valve. The calculated valve area (admittedly low due to her mild mitral insufficiency) was  $0.8 \text{ cm}^2$ . Peak pulmonary arterial pressures were 78 mm Hg. The total pulmonary resistance was calculated at  $1480 \text{ dynes-sec-cm}^{-5}$ . Due to the findings at catheterization and the patient's symptoms, she was taken to the operating room where an open commissurotomy failed to attain the desired result and she was given a Starr-Edwards 6320 Series prosthetic mitral valve. Twenty-four hours following surgery she was noted to have a somewhat irregular rhythm and the following electrocardiogram was obtained. (Fig. 2)

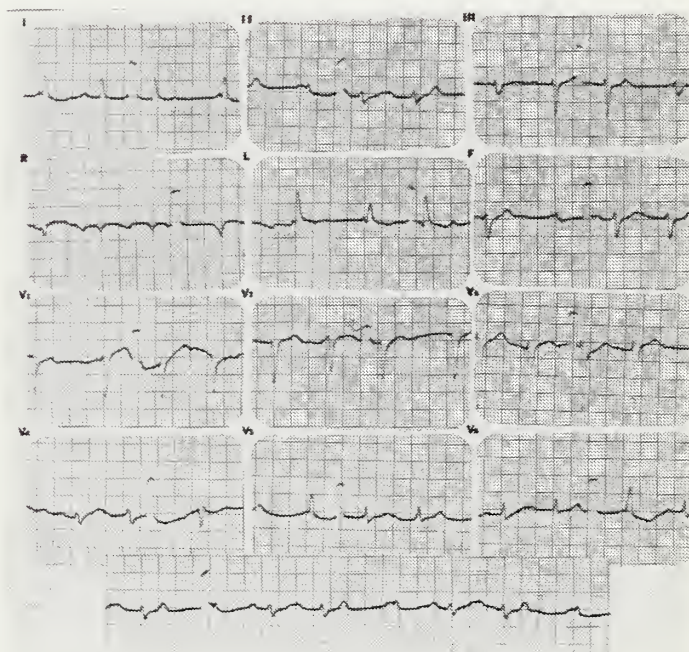


FIG. 2

patient's digitalis therapy. The second electrocardiogram (Fig. 2) obtained 24 hours post-operatively shows a marked change in direction of QRS forces. The most striking change is in standard lead I where a tall R wave has appeared. It is also of note that an R wave is present in AVL and an RS pattern is present in the inferior leads (II, III, AVF). The rotation of the QRS forces is in a counterclockwise direction with the early force being oriented inferiorly and the late forces being quite leftward

(Continued on page 1059)





## from the tennessee department of public health

The health and development of children are at both the national and the state level, and efforts to promote adequate health care for children are a vital part of the work of the Tennessee Department of Public Health. Programs designed to assure each Tennessee child the opportunity to grow and develop optimally are carried out through the Division of Child Health and Development.

Under the direction of Dr. Robert H. Hutcheson, Jr., Director of Personal Health Services, and Dr. Dorothy J. Turner, Pediatric Programs Coordinator, the Division has concentrated its resources in immunization services, consultation with health care provider organizations, special projects in child health and development, and sickle cell anemia screening.

The child enters these public health programs by a visit to the local health department. In the Infant and Child Health Clinics a Public Health Nurse will visually screen the child for problems, provide immunizations, and counsel parents on nutrition and on behavioral and developmental patterns of the growing child. These inspection and counseling sessions are recommended at specific intervals during the child's life. When developmental delays or health problems are observed, corrective measures are initiated by the Public Health Nurse.

The nurses and staff members of the Division of Child Health and Development work together in planning, implementing and participating in in-service education programs to ensure that current knowledge and skills are available to the child and his family. Division staff members have recognized a growing concern with matters relating to maternal deprivation and child abuse. Special training programs for nurses have been developed on these subjects as well as discussion material for several community groups. In addition to collaboration on training programs, the staff also provides individual consultation with public health nurses, and other assistance as needed.

To provide easy reference and guidance in child health and development, the Division has prepared a publication entitled *Child Health Standards* which is supplied to all local health

departments. The manual is continually revised to reflect current medical information.

A second Division publication, *You and Your Life: Adolescence To Adulthood*, is the basic text used in junior and senior high schools in 50 percent of Tennessee's counties. During the 1972-73 school year some seven thousand students participated in this course designed to prepare young adults for future roles as parents—the persons with the primary responsibility for the health and development of children.

### IMMUNIZATION PROGRAMS

One of the most important steps in preventing health problems in children is the provision of immunizations against certain communicable diseases. Staff activities directed toward assuring comprehensive immunization programs include disease surveillance, studying the epidemiology of vaccine-preventable diseases, assessing local immunization levels and immunization activities by source, providing consultation on routine activities and special programs, and monitoring compliance with legislation.

### SICKLE CELL ANEMIA SCREENING

Another major concern for the Child Health and Development staff is the detection and treatment of sickle cell anemia. A pilot project in screening is currently underway in Child Health Clinics in 17 counties. The public health nurse uses a tube solubility screening test when she checks hematocrits in infants six months through four years of age. If the test shows positive results, the child then receives a hemoglobin electrophoresis test. When indicated, other family members are screened and appropriate referrals provided for persons found to have sickle cell hemoglobinopathies. Special emphasis has been given to educating nurses about sickle cell anemia so that they may effectively assist physicians in follow-up home care of sickle cell anemia patients.

### SPECIAL PROJECTS

One of the exciting new beginnings in the Division of Child Health and Development is the Upper Cumberland Child Development



Project. In this program, public health nurses, caseworkers, and home visitors combine their skills to maximize each child's potential for effective growth and development through a program of infant and toddler stimulation, educational intervention, and thorough attention to health and social problems. Team members work with mothers in teaching methods that will foster the child's motor skills, his coping ability, and his problem solving skills in an effort to help him learn more effectively.

The Project nurse gives immunizations to Project children in the local health department. She works intensively with families who have children with chronic illness or birth defects by guiding, teaching, and giving care. She acts as a health resource to other members of her team and to families with other health needs. The social workers also have special helping skills. One of their roles is to determine resources in the Project county that may be used for troubled families. Such resources may include financial and vocational counseling, clothing, housing, or transportation information. They act as a linkage to these referral points in helping families receive needed services. They also assist other team members in working with these special families. The home visitor educator's

primary role is that of educational stimulation, working with the mother and teaching her methods that will help her child's development.

Although the Project has only been underway for a short time in Macon, Clay, Fentress and White counties, approximately 400 children have received services. Referrals come via notification of new births, from community agencies, and from program participants.

All Project employees receive an orientation to public health and social work. Training in educational intervention is given at the Demonstration and Research Center for Early Education (DARCEE) at George Peabody College for Teachers.

Another innovative Child Development project is the Tennessee Appalachian Comprehensive Child Development Project. This Project, much like the Upper Cumberland Child Development Project, is designed around the multidisciplinary team of a nurse educator, caseworker, and home visitor educator. The methodology is home intervention and visitation in the homes of all newborn infants in the target county. This Project will involve at least 10 counties in the Appalachian region of Tennessee. Plans call for the Project to become operational this fall.

\* \* \*

## EKG of the Month

*(Continued from page 1057)*

and superior. The mean QRS axis is leftward of  $330^\circ$  ( $-30^\circ$ ). There is a very small initial Q wave in standard lead I. The electrocardiogram, therefore, discloses the presence of postoperative anterior hemiblock. In addition, the patient is noted to have progressively lengthening PR in-

tervals with every third QRS complex being dropped. The atrial rate is quite regular at 110/minute. This Wenckebach pattern disappeared over the next 48 hours. The patient had an uneventful recovery following surgery and has been continuing her convalescence satisfactorily at home.

HARRY L. PAGE, JR., M.D.  
W. BARTON CAMPBELL, M.D.

\* \* \*

## Clinical Center Study of Patients with Chronic Lymphocytic Leukemia

The cooperation of physicians is requested in the referral of patients with chronic lymphocytic leukemia for studies being conducted by the Immunology Branch of the National Cancer Institute at the Clinical Center, National Institute of Health, Bethesda.

NCI investigators are currently attempting to develop reagents with specificity for tumor antigens in chronic lymphocytic leukemia. Patients who meet the following criteria are being sought:

1. Confirmed diagnosis of chronic lymphocytic

leukemia; 2. WBC  $25,000/\text{mm}^3$ ; 3. No treatment currently.

Physicians interested in having their patients considered for admission may obtain further information and details of the study by writing or calling:

Howard Byron Dickler, M.D.  
Immunology Branch  
National Cancer Institute  
National Institutes of Health  
Clinical Center, Room 4B17  
Bethesda, Maryland 20014



## THE COOPER QUIZ\*

Answer true or false unless otherwise indicated

(Answers found beginning on page 1100)

1. During major surgery fluid volume dynamics and albumin kinetics vary greatly. Of the following which factor will vary the most? (total red cell volume) (extracellular fluid volume) (total exchangeable albumin pool) (plasma volume)
2. In the treatment of status asthmaticus neuromuscular blocking agents have been suggested as an adjunct to accepted drug therapy. From the list below which one appears to be the neuromuscular blocking agent of choice? (curare) (gallamine triethiodide) (succinylcholine chloride) (pancuronium bromide)
3. This study of the use of neuromuscular blocking agents in status asthmaticus recommends that the agents be started at the same time that usual medications are started.
4. In patients who have transient ischemic attacks far less than half will go on to develop a completed stroke.
5. Of patients who have retinal strokes (retinal arterial occlusive disease) many will, within 4 or 5 years develop further retinal strokes. Very rarely will they develop cerebral strokes.
6. The LSD molecule is capable of altering the structure of DNA in vitro. Both teratogenesis and mutagenesis may be due to altered DNA.
7. In a Washington, D.C. study drug users (all taking at least LSD and many other drugs), had an incidence of major congenital anomalies of 10 to 20 times the expected rate for the American population.
8. The following list contains some of the causes for implanted pacemaker failure, which is the most common? (battery failure) (moving of an electrode) (encrustation of an electrode) (defects in wiring)
9. A system of combined battery and electrode testing when battery failure was the problem there was adequate time for routine replacement before the pacemaker output dropped to critical level.
10. Patients with diabetic neuropathy do well on hemodialysis, even to increasing length of survival.
11. There is little controversy about oral contraceptives increasing the BP in some users. The elevation is greater in the (systolic) (diastolic) pressure.
12. The dose and the components of the oral contraceptives had a significant influence on the degree of hypertension produced.
13. Anicteric hepatitis (posttransfusion) is (more) (less) frequent than icteric cases.
14. Cholesterol concentration among diabetic patients with and without atherosclerosis was more sensitive than the triglyceride level.
15. Both hypertriglyceridemia and obesity are *independently* related to atherosclerosis in diabetic patients.
16. We know of no studies that refute the fact that dietary carbohydrate (particularly glucose, sucrose and fructose) increase hypertriglyceridemia, if regularly included in the diet.
17. The benefits of laparotomy in Hodgkin's disease so far out balance the mortality and morbidity of the procedure that the latter should not be considered.
18. Percutaneous liver biopsy is about as accurate as open liver biopsy in finding Hodgkin's disease in that organ.

\*Published by the Dept. of Medical Education, the Cooper Hospital, Camden, N.J., William T. Snagg, M.D., Director, (Deceased).



**from the  
executive  
director**

**J. E. BALLENTINE**

# **MEDICAL DIGEST**

**NEWS OF INTEREST TO DOCTORS IN TENNESSEE**

## **OFFICERS AND DELEGATES SHOULD BE SELECTED NOW BY COUNTY SOCIETIES . . .**

County medical society Officers have recently received information and official forms for use in following requirements in the TMA By-Laws to elect county Officers, and Delegates for the TMA House of Delegates, and report those elected to the Tennessee Medical Association by January 1, 1974 . . . It is urgently requested that the county societies conduct their elections before the end of December . . . The names of Delegates to the House are needed so that the Nominating Committee can be appointed by the Board of Trustees. The names of committee members can then be made known to the county medical societies for contacting Nominating Committee appointees.

\* \* \* \* \*

**TMA ANNUAL MEETING PLANS FOR 1974 . . .** TMA has completed plans for conducting the 1974 Annual Meeting on April 11-13 at Gatlinburg. The program is being developed in conjunction with the sixteen medical specialty societies that will meet with TMA. Keep these dates before you . . . Timely topics and speakers will combine to make the 1974 general and specialty society sessions one of the very best . . . TMA members are urged to set aside the above dates on your calendar. Outstanding speakers have accepted to participate in an interesting scientific presentation . . . The subject is on "Basic Mechanisms of Disease." Speakers will discuss such topics as "Status Quo: The Basic Immunological Reactions," "Things Gone Haywire," "The Body's Watchdog--Tumor Surveillance." TMA will present this program on Friday morning, April 12 . . . Sessions of the House of Delegates will be held on Wednesday evening, April 10 and Saturday morning, April 13. Reference Committee hearings by the House will be held on Thursday, April 11. Every member can attend and be heard at the Reference Committee on business of the House. Plan now to attend TMA's outstanding Annual Meeting in Gatlinburg. Headquarters will be at the Gatlinburg Auditorium. Other events will take place in the hotels and motels in Gatlinburg.

\* \* \* \* \*

**PICKETING A PHYSICIAN'S OFFICE . . .** The right to picket a physician's office has been upheld by a Texas Court of Civil Appeal. After the state board ethics committee decided that the fee charged was not unreasonable, a patient's mother parked her car in front of the physician's office and began displaying signs protesting the "outrageous charges." The physician obtained a temporary injunction which was then reversed by the Court of Civil Appeal on the basis that the injunction was a violation of the woman's right to freedom of speech



and that the physician's interest in being free from public criticism did not warrant the use of the Court's injunctive powers. (Stansbury v. Beckstrom, 491 S.W.2d 947, Tex. Ct. of Civil App. 1973.)

\* \* \* \* \*

**TMA COMMITTEES CONTINUE ACTIVE . . .** The fall months found TMA's committees actively participating in committee work. During the past eight weeks meetings of the Interprofessional Liaison Committee, the TMA-THA Liaison Committee, Emergency Medical Services Committee, and Continuing Medical Education Committee, have had busy sessions . . . The Board of Trustees, and the Tennessee Foundation for Medical Care board met for an entire day on October 14 . . . An outstanding Rural Health Conference was conducted in Jackson early in October with 312 attending the conference held at Lambuth College. Interest continues to grow each year in the Rural Health Conference sponsored by TMA.

\* \* \* \* \*

**CHARGE STANDARDS OPEN TO PUBLIC . . .** Medicare prevailing charge standards will be open to the public, including physicians--under a new rule adopted by HEW. The disclosure policy, which was opposed by the Social Security Administration, applies to "screens" for both Part A and Part B. Individual physician's charges will remain confidential. The policy became known when HEW said it would not appeal a U.S. District Court Judge's decision that the secrecy of Part B charge standards is a violation of the Freedom of Information Law. Following the decision by Judge William Jones of Washington, D.C., HEW ordered Blue Shield to release Part B information for Maryland, Virginia, and the District of Columbia to a medical writer who had been seeking full disclosure of Medicare operations . . . The screens vary widely from state to state and within the states, and SSA has expressed concern that the disclosure would bring complaints. The Judge said in his decision that disclosure might result in demands for higher screens in some areas, but that health industry price controls would hold down major changes.

\* \* \* \* \*

**PSRO LAW IMPLEMENTATION . . .** It is becoming more and more a topic of discussion among physicians. The TMA House of Delegates directed the Tennessee Foundation for Medical Care to seek a designation of only one PSRO in Tennessee to act as the prime contractor with HEW. In turn, subcontracts could be made with review mechanisms at the local level already in existence or those to be organized for this purpose. This concept recognizes and supports the principal that peer review, to be effective, has to be done at the "local level" by "local physicians." This mechanism also provides a buffer between the reviewing group of physicians and the Department of HEW . . . Designated areas of PSRO organizations in Tennessee are to be made known some time in November according to statements from HEW representatives.

\* \* \* \* \*

**PROFESSIONAL EXPENSES . . .** A 20.4% increase in physicians' professional expenses and only a 5.2% increase in their net incomes between 1969 and 1970 are reported in the 1973 edition of AMA's "Red Book," "Reference Data on the Profile of Medical Practice." The "Red Book" is available from the AMA's order department for \$1.35 a copy.



**public  
service**



## **COMMUNICATIONS • LEGISLATION**

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**MID-SOUTH RMP PROGRAM REORGANIZED . . .** A new Regional Advisory Group has been named by the Mid-South Regional Medical Program along with a complete By-Law revision. The action took place at the RAG's September 19, 1973 meeting. In addition, Richard O. Cannon, M.D. was named Director of the Program, succeeding Paul E. Teschan, M.D. The new RAG is composed of 36 people as compared to the previous 63-man RAG. Five practicing physicians were nominated to serve on the RAG. They are: Drs. Lawrence R. Nickell of Columbia, Stanley E. Vermillion of Johnson City, J. Marsh Frere of Knoxville, Robert C. Coddington of Chattanooga and Charles Clark of Kentucky. Drs. Morse Kochtitzky, TMA president and John B. Thomison, TMA editor, were also nominated to serve. Representing the University Medical Centers are Drs. John E. Chapman, John Hopkins, Lloyd Ramsey and Louis Bernard, Jr. all of Nashville. Other physicians nominated were Drs. Curtis P. McCammon of Knoxville, Harry Waggoner of Johnson City, Walter G. Gobbel, Jr. of Nashville, Lee L. Williams of Knoxville and Jack Strickland of Chattanooga. Dr. McCammon was named Chairman of the RAG's Executive Committee.

\* \* \* \* \*

**RURAL HEALTH CONFERENCE HELD IN JACKSON . . .** The Eleventh Annual Rural Health Conference was held in Jackson at Lambuth College on October 3, 1973. Registration totalled 312. A total of 14 speakers appeared on the program to discuss such topics as "Dangers of Living in the 20th Century," "Trends in Drug Abuse and Alcoholism," "Hospital Emergency Room," and "Functions and Purposes of the Newborn Intensive Care Unit." The Conference was jointly sponsored by Tennessee Farm Bureau Federation, University of Tennessee Agricultural Extension Service and Tennessee Medical Association.

\* \* \* \* \*

**WARNING . . .** The AMA has suggested that component medical societies and physicians not cooperate with the "U.S. Medical Directory" which solicits individual listings from physicians at a charge of \$10, using solicitation letters resembling invoices. The AMA points out that this "directory" which has never been published, should not be confused with the AMA Directory.

\* \* \* \* \*

**NEW NHI PLAN PROPOSED . . .** A newly proposed National Health Insurance plan would cover all major family medical costs beyond \$2,000 annually. The authors of the bill are Senators Russell B. Long (D-La.) and Abraham Ribicoff (D-Conn.) who indicate that the bill places major emphasis on catastrophic illnesses. The measure would provide coverage for costs of all major medical expenses of \$2,000 in a year and beyond 60 days of



hospitalization for each individual. Also included in the measure are basic insurance benefits for families in the low income bracket as well as ways for persons not in the low income bracket to obtain private insurance coverage for the first \$2,000 of care and the first 60 days of hospitalization. The benefits under the catastrophic illness feature of the proposal would include medically necessary hospital care, physicians' services, home health services and nursing home care. The envisioned cost of the legislation would be \$8.9 billion.

\* \* \* \* \*

**VOLUNTEER PHYSICIANS FOR VIET NAM PROGRAM TERMINATED . . .** All operations related to the Volunteer Physicians for Viet Nam (VPVN) program ceased in Viet Nam on June 30, 1973. This humanitarian program, initiated as Project Viet Nam in 1965, became the responsibility of AMA on July 1, 1966. Since the inception of the VPVN program, a total of 774 American physicians have served 1,029 tours in provincial hospitals in South Viet Nam. During the past eight years, these American physicians have contributed in excess of 150 man-years of voluntary service to the civilian population of war-torn Viet Nam. The volunteers came from all fifty states, the District of Columbia, Panama Canal Zone, Puerto Rico, Virgin Islands, and ten overseas areas. Eight Tennessee physicians volunteered and served in Viet Nam during the program's existence. They are: Drs. Joe F. Bryant of Lebanon, Richard France of Nashville, Nat E. Hyder, Jr. of Erwin, Barbara A. Kenyon of Nashville, Curtis McGown of Clarksville, William W. Pyle of Franklin, Paul Spray of Oak Ridge and John H. Wolaver of Knoxville.

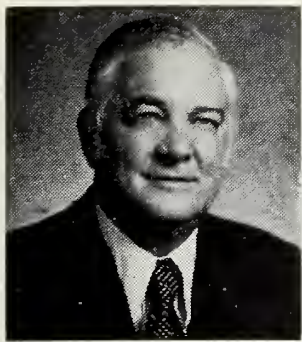
\* \* \* \* \*

**SHORT PROCEDURE UNIT OPENS IN KNOXVILLE . . .** St. Mary's Memorial Hospital in Knoxville operates a short procedure unit designed to serve patients who, in the physician's estimation, need hospitalization without staying over-night. The unit provides short-term service to patients needing minor surgery and some diagnostic studies. The six-bed unit, which is located near the surgery department, is open from 7 a.m. to 6 p.m. After the patient's physician has scheduled a procedure, St. Mary's Admitting Office contacts the patient and obtains necessary information required for the hospital records and admission forms. When arriving at the hospital, the patient signs the admission form and proceeds to the unit. The patient is able to leave the hospital directly after being dismissed by the attending physician. Since all arrangements are made prior to or on admission, the patient does not have to go to the Business Office. Patients who need to remain in the hospital are transferred to a unit with the appropriate level of care. Patients who have used the unit appreciate both the time saving qualities and the savings in cost. (From Blue Cross-Blue Shield Executive Newsletter)

\* \* \* \* \*

**VOCATIONAL REHABILITATION ACT NOW LAW . . .** President Nixon has signed into law a two-year, \$1.54 billion, extension of the Vocational Rehabilitation Act. The bill, P.L. 93-112, is a reduced version of legislation which President Nixon had twice vetoed. The President, noting the reduced spending authorization, described the measure as ". . . encouraging example of legislative compromise." In addition to extending programs for training the handicapped, the bill also authorizes the establishment of rehabilitation research and training centers, and rehabilitation engineering research centers.





MORSE KOCHTITZKY

## president's page

### PSRO

For the past six months the Tennessee Foundation for Medical Care has been planning for a statewide coordinated Professional Standards Review Organization. Recently the National Advisory Council for PSRO approved an option that would permit statewide peer review organizations regardless of size, and at the same time allow the large county or multiple county medical societies to have the option to apply for autonomous PSR organization status. The law does not contain any restrictions against such a development. Most physicians advocate a statewide MD-DO organization as the prime contractor because it is believed that such a joint effort would perform professional standards review services more efficiently and economically; could prevent duplication of administrative costs; and could conduct meaningful programs of continuing medical education for physicians as a vital aspect of PSRO.

We have discussed with representatives from the Regional Office of HEW in Atlanta a proposal submitted by the Foundation for the designation of seven PSRO areas included in a proposed statewide coordinated review plan. These areas would include the four metropolitan county medical societies plus the three grand divisions of Tennessee for a total of seven review organizations.

Tennessee physicians in general are disturbed by the unknown factors of Public Law 92-603 and are asking how these PSRO's function?

What problems can be expected? Will we really have the major voice in planning or will Federal agencies usurp this right?

Will PSRO's really help assure quality care or will they merely serve economic purposes not spelled out in the law?

Physicians know that existing review committees in hospitals and medical societies can and many do function effectively. We also know that we plan for the local development of norms and standards and for local review. We are not sure what others plan for us.

In summary then, the Tennessee Medical Association and its Foundation for Medical Care represent responsible organizations representing more than 3,700 doctors of medicine in the state. Our members are pledged to quality care for every patient. We have many concerns about the interpretation of the new PSRO law because there are no written guidelines or regulations as yet. At the same time, we cannot afford to ignore the law. Conferences such as the recent two-day meeting in Atlanta where Tennessee was well represented add to our information but give no definitive rules or regulations.

The Board of Directors of the Tennessee Foundation for Medical Care continues to stay abreast of PSRO developments and most recently has developed a program to begin Medicaid review which will give us a real "leg up" on total in-house review as required of all our hospitals by JCAH as well as on Medicare review (PSRO) when it becomes mandatory.

We will continue to keep you informed of new developments.

Sincerely,

President



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NOVEMBER, 1973

and manufacturers, but more likely because the ban did not include over-the-counter cough and cold remedies. These usually contain roughly the same ingredients as the prescription remedies, but frequently in homeopathic amounts. The FDA apparently is waiting until the panel investigating these drugs brings in its results. so as to consider them together.

What is really shaping up, or really has already formed, is a power struggle on the part of the FDA to control not only the drug industry, but also the practice of medicine insofar as treatment by drugs is concerned, this in spite of disclaimers by the FDA. Present impetus was derived from a landmark decision handed down by the United States Supreme Court on June 18—a unanimous decision incidentally—ruling that the FDA has sweeping authority to take ineffective drugs off the market, impose stringent rules for assessing product effectiveness, deny manufacturers hearings on contested actions, and proceed against groups of similar drugs as a class instead of individually. Justice Douglas wrote the decision, which comes down hard on the side of those who believe that only demonstrably effective drugs should be sold.

Now, perhaps you feel all this is the problem of the drug manufacturers, and that we should not waste our energies fighting their battles. I submit that this is our battle as much as it is theirs.

The FDA considers itself the watchdog for the public, to insure that any given drug is what the label says it is and that it will do what it is purported to do, with a minimum of side effects—or at least dangerous side effects. In this they are correct, and this is their mandate. Their requirements for adequate labelling, including detailed package inserts, are a reflection of this mandate.

The FDA also considers itself as having the role of determining whether a drug is being properly used, and, in the words of the present commissioner, Dr. A. M. Schmidt, *scientifically* used. This in his view means according to information contained in the package insert. Any other use he considers unwise and therefore unjustified. If a physician uses a drug in ways other than in the way so described, he should obtain permission to conduct an experiment, write up his results, and submit them to the FDA. Then, if the FDA considers the results valid, the label can be changed to reflect them. His operating assumption, he says, is that doc-

## editorials

### THE FDA—REPRISE

Over the past year a spate of articles and editorials has broken out in medical journals, including this one, as well as in the lay press, about regulation and legitimate uses of drugs. We began in this journal by talking about hexochlorophene and the seemingly rather reckless action on the part of the FDA in banning, at least for all practical purposes, the use of this valuable drug. The many articles written about it didn't do much good, and we are surviving, though perhaps not as well, without it.

Then, this spring, the FDA announced that it would remove from the druggists' shelves prescription cough preparations, on the premise that they are ineffective—not harmful, just ineffective. This action has been indefinitely postponed, possibly because of reaction by physicians



tors are basically scientists and should prescribe drugs like scientists.

There are some things of merit in Dr. Schmidt's views, and they are backed up by court decisions. The burden of proof, say the courts, is on the physician who departs from the instructions. Underneath it all, however, there seems to be an undercurrent of opinion that the practicing physician is not quite bright, and must be forced to practice according to the book—their book. This in the face of the clear statement of the law which says final judgment rests with the practicing physician, because, as we all know, patients react differently to drugs. Although physicians can be forced to work by the book, an individual patient with an individual disease is subject to no such regulation. This, incidentally, is why ant substitution laws are necessary. Different drugs which on the basis of their pharmacology *should* work the same way often fail to do so in the individual patient. The pharmacist knows about drugs, and it is useful to consult with him, but he does not know the patient, and therefore substitution of another drug "just as good" is potentially dangerous.

Well, what can *you* do to combat this increasing encroachment on your freedom to practice medicine?

First, insist, through your elected representatives to the AMA House of Delegates, that the AMA take a strong stand that the FDA modify its systems and procedures and listen to opinions of qualified practitioners who take care of real live people outside the ivory tower. Several strongly worded resolutions were presented before the last House, but were replaced by watered down substitute resolutions which, though they will offend no one, will also probably do little or no good.

Second, *conduct an experiment!* If you have reason to believe the package insert doesn't tell the whole story, challenge it. In case you think this is far out, read the account on page 283 of *Medical Economics*, September 17, 1973 of the lawsuit by 178 physicians expert in the handling of diabetes, a patient, and a lawyer, against the FDA. This case could have the result of requiring the inclusion of valid differences of opinion in the package insert.

Finally, stay alert. Recognize that the FDA has clearly defined, necessary functions, and is not, at least right now, your enemy. Its work is for your protection as well as the patient's. But like bureaucracy generally, in order to preserve

itself and prove not only its worth but its necessity, it tends to usurp powers the Congress never intended it should have. Only you, acting in concert with your fellow physicians, can prevent the FDA from becoming just another of the long list of federal agencies which are eroding your rights to practice. The sad part is that the one who will ultimately suffer is the one the FDA is trying to protect—the patient.

J.B.T.

*Note: For another view on this subject, see our Viewing Box, page 1093, an editorial from the Virginia Medical Monthly entitled "Julius Caesar, Estes Kefauver, and the FDA."*

## ON SEXUAL FREEDOM

A few years ago it was the considered opinion of most people—epidemiologists, practitioners, and the public—that VD (syphilis and gonorrhea) would soon be a thing of the past. The reservoir of infection would be wiped out, and that threat would no longer be present as a deterrent to or a consequence of extracurricular activities. Some time later it seemed "the pill" would remove the last barrier, and mankind, male and female, could revel in the joys of copulation without fear. Well, friends, it didn't happen that way.

I am sure it is no news to you that syphilis and gonorrhea have triumphantly survived, and girls continue to be surprised and dismayed. In the "Statement on Venereal Disease" by the AMA Council on Environmental, Occupational, and Public Health, reprinted as a Special Item elsewhere in this issue, gonorrhea ranked first and syphilis third among reportable diseases in the United States in 1972, when there were nearly 800,000 cases of gonorrhea, 14% higher than in 1971, and double the number reported in 1965. Indications are it will be still higher in 1973. There is no good estimate as to how many go unreported, but we all know they are considerable.

As none of this has ever acted as any real deterrent, it should be apparent that in today's atmosphere of sexual freedom we have to face the fact of VD and unwanted pregnancies. This is being done in a variety of ways; but I should like to submit that public attitude, including that of many of our colleagues, has contributed more to the problem than to the solution. Our "society," being largely a figment, is schizophrenic about the whole thing. It wants freedom, but—.



In their paper in this issue of the JOURNAL, Roberts and Glassco mention in passing the work of Pariser, who is director of the VD control program of the Norfolk, Va., Health Department, and who discovered that nearly 20% of the male contacts of infected women developed asymptomatic gonorrhea. But he also reported a high incidence of rectal and pharyngeal gonorrhea. Rectal gonorrhea resulted primarily from homosexual activity. In a seven month period all patients entering the Norfolk VD clinic were asked whether or not they practiced fellatio. Of 586 patients questioned, 138, or 24%, reported they did, and of that group, 31, or 22%, were found to have pharyngeal gonorrhea. Most were white middle or upper middle class females.

It is difficult to get VD patients cared for properly, and almost impossible to trace contacts, because of the attached stigma, and yet the epidemic cannot be brought under control in any other way. Girls subject themselves to abortion (even, previously, in the face of possible infection and death) rather than face the shame of being an unwed mother. Now abortion has been made relatively safe and easy, and the demand for children for adoption far exceeds the supply, which is something to think about. For all of this, the "good" people of the world must share the blame with the "sinners."

The temptation is great to abdicate our responsibilities, so as not to get involved, and to take the easy way out, which is to give a shot of penicillin or arrange for an abortion and send the patient "merrily" on his (her) way. To act responsibly requires our time, and something of ourselves.

The answer to the problem of the fruits of illicit sex (as to almost everything else) is compassion. We (everybody, but particularly physicians) need to learn not to pass moral judgment on persons, however much we may disapprove and condemn what they do. There is a difference. We need, as physicians, to build up a level of trust that we will treat and comfort, and not judge or moralize. That is the first thing we can do.

But perhaps more important is our obligation to educate the public that these are persons in need of help. This would go a long way toward removing the reservoir of infection, and would save a lot of infants. And we can educate the outwardly sophisticated but incredibly naive

young (not to mention their often equally ignorant elders) on venereal disease and on contraceptive and prophylactic measures. We do not need to fear "putting ideas into their heads." The ideas are there already. The mounting VD rate among the young is ample evidence we would not be contributing to their delinquency. And it would be a significant contribution to "preventive health care."

J.B.T.

## ERRATUM

Credits on "On Continuing Medical Education" By William F. Meacham, M.D. Vol. 66, No. 9, Sept. 1973, p. 819-822, should have read "Delivered in part as The Presidential address, Society of Neurological Surgeons, New Haven, May, 1972. Dr. Meacham is Professor of Neurosurgery, Vanderbilt University School of Medicine.



BALLOU, OLIN E., Knoxville, died September 1, 1973, age 66. Graduate of University of Tennessee School of Medicine, 1931. Member of Knoxville Academy of Medicine.

HOLDEN, WILLIAM B., Oak Ridge, died September 2, 1973, age 52. Graduate of Jefferson Medical College of Philadelphia, 1945. Member of Roane-Anderson County Medical Society.

NEWMAN, ELLIOTT V., Nashville, died September 24, 1973, age 59. Graduate of Harvard University School of Medicine, 1939. Member of Nashville Academy of Medicine.

## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### **BUFFALO RIVER VALLEY MEDICAL SOCIETY**

Robert Markman, M.D., Linden

### **CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY**

Olga D. Medina, M.D., Hixson

Oscar D. Medina, M.D., Hixson

John R. Morgan, M.D., Chattanooga

David J. Tepper, M.D., Chattanooga



## **CUMBERLAND COUNTY MEDICAL SOCIETY**

Jerome Sag, M.D., Monterey

## **MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY**

John R. Crockarell, M.D., Memphis  
Abraham Garcia, M.D., Memphis  
Vartkes Kiledjian, M.D., Memphis  
Thomas E. McLemore, M.D., Memphis  
Richard A. Paskowitz, M.D., Memphis

## **ROANE-ANDERSON COUNTY MEDICAL SOCIETY**

Laurence R. Dry, M.D., Oak Ridge  
Robert S. Hellman, Jr., M.D., Harriman  
James I. Hilton, M.D., Oak Ridge

## **SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY**

Paul M. Allen, M.D., Kingsport  
Bert L. Booker, Jr., M.D., Kingsport  
H. Austin Carr, M.D., Bristol  
James A. Gwinn, M.D., Bristol, Va.  
Jane Toothman, M.D., Bristol

## **programs and news of medical societies**

### **Knoxville Academy of Medicine**

The Knoxville Academy of Medicine met October 9, 1973. Mr. F. Rodney Lawler, Executive Director of Knoxville Community Development Corporation, spoke to the E Club on "Knoxville Development Planning."

The Scientific meeting included: medicine, Dr. John Leonard, Fellow, Infectious Disease, Vanderbilt University School of Medicine, who spoke on "The Newer Antibiotics and Their Uses." General Practice and Psychiatry heard Dr. Alex G. Chronis, Clinical Director, Peninsula Psychiatric Hospital discuss "Sleep Disturbance in Psychiatric Illness."

## **national news**

### **THIS MONTH IN WASHINGTON (From Washington Office, AMA)**

William I. Bauer, M.D., has resigned as director of the controversy-ridden Professional Standards Review Organization (PSRO) program, expressing dissatisfaction with the PSRO organization setup.

The surprise step-down was a shock to the top officials at HEW who have been reeling from the loss of other high officials upset over the lengthy reorganization of the health activities at the HEW department.

Charles Edwards, M.D., Assistant HEW Sec-

retary for Health interrupted a planned business retreat to hurry back to Washington when news of the resignation filtered out. He called a news conference but then cancelled it after the reporters had shown up. Dr. Edwards was in conference with HEW undersecretary Frank Carlucci at that time.

The PSRO program is a particularly sensitive one to be subject to the inevitable repercussions and criticisms that follow a resignation. Members of the Senate Finance Committee have been taking a hard line on involvement of state medical societies in the PSRO review of institutional care under Medicare and Medicaid. Some physician groups and state societies, and the PSRO advisory committee, have urged a broader authority for state societies. In general, HEW and Dr. Bauer had appeared to be attempting a middle course.

Furthermore, the gearing-up for the intricate and complicated program has been a mammoth task for Dr. Bauer.

The 48-year-old Dr. Bauer was named to the PSRO post last March after a career as a practicing internist in Greeley, Colo. Other HEW officials who have resigned in the past several months are Gordon McLeod, M.D., director of the Health Maintenance Organization (HMO) program, and Arthur Lesser, M.D., head of Maternal and Child Health Services.

In a statement, Dr. Bauer said the administration has made a "significant commitment to PSRO but that commitment has not been translated into action. . . ."

"This extremely complex program with ramifications at all levels of medical care has been provided with limited resources and those resources that were made available could not be effectively administered and utilized because of the organizational structure," Dr. Bauer said.

According to an HEW spokesman, the resignation stemmed from a dispute between Drs. Bauer and Edwards over organizational control of the PSRO program. Dr. Bauer was said to believe that he could not exert meaningful authority under the present setup in which much of the field work for PSRO, involving hundreds of physicians, would not come under his line control but under the Bureau of Quality Assurance. Dr. Edwards, the spokesman said, contended that Dr. Bauer would still have the say-so, but Dr. Bauer obviously disagreed.

Underlying the dispute, apparently, has been the effort of Dr. Edwards to pry PSRO control



away from Social Security and Social and Rehabilitation Services, present overseers of Medicare and Medicaid, and to give the Health Department clear jurisdiction in PSRO.

Under the reorganization, 50 physicians at Social Security and 150 in the Health Services Administration are assigned to PSRO but not directly under Dr. Bauer who had 36 staff positions.

There was no indication from Dr. Bauer of any philosophical differences with the administration over how PSRO would function at the local and state level.

\* \* \*

The House has approved legislation that will provide federal funds to start a limited number of experimental Health Maintenance Organizations over a five year period to the tune of \$240 million. The Senate's version of HMOs, passed months ago, would provide \$805 million over the same period. House and Senate conferees must now resolve the differences.

The compromise bill voted by the House calls for spending \$60 million this fiscal year, the Administration figure. The bill meets many objections raised to the original measure by the Administration and the American Medical Association.

Though no specific number limitations was set in the House bill, the limit of authorizations to \$240 million will provide an effective ceiling on the number of HMO's which could be established. The House Commerce Committee estimated the legislation would be used to bring to the operating stage approximately 100 new HMO's.

The bill has a flat five-year cut-off for the HMO program.

Unlike the Senate bill, the House legislation does not pre-empt state laws that restrict formation of HMO's. The reason given by the House Commerce Committee was "the rapid change already underway in state legislation designed to remove these barriers." Approximately 20 states have already adopted legislation specifically authorizing HMO's.

The bill limits grants or contracts for planning and initial development costs by prohibiting this assistance after 1976.

Initial development assistance would be prohibited after 1977.

Loans and loan guarantees for initial operation costs are authorized except that loan guarantees could be provided only if the HMO will

serve residents of a medically underserved area.

The bill has no authority for loan guarantees for construction projects.

For grants and contracts for feasibility studies, initial planning and initial development costs, the bill would authorize \$40 million for fiscal year 1974, \$45 million for fiscal year 1975, and \$50 million for fiscal year 1976. In addition, it would authorize \$55 million for fiscal year 1977 for grants and contracts for initial development costs. The bill would authorize \$20 million for fiscal year 1974 and \$30 million for fiscal year 1975 to be appropriated to the loan fund.

The bill unlike the original subcommittee bill, has no authority for demonstration grants and contracts for enrollment of the indigent, for providing service in rural medically underserved areas, and for enrollment of high risk individuals. There also is no authority for special project grants and contracts, for grants for HMO management training, and for program evaluation.

Provisions for protection against insolvency of HMO's, against the cost of providing unusual amounts of health services or of providing out of area health services, and protection against unusual losses were not contained in the final bill. Also deleted were provisions which authorized technical assistance and consultative services to aid in the planning or development of an HMO.

\* \* \*

A public-private National Center for Health Education to oversee efforts to provide better health information to the public was recommended by President Nixon's Special Committee on Health Education.

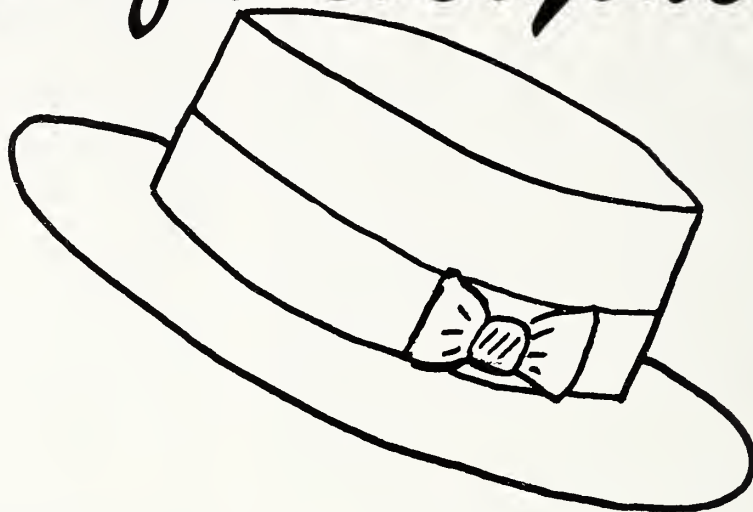
In a report to the chief executive, the 17-member advisory group said future improvements in health care delivery and financing "will be virtually nullified unless there is, at the same time, an improvement in health education, which means not just supplying information about health to people, but motivating them to accept the information and put it to work in their daily lives."

Only a small fraction of the nation's health dollar is spent on public education, the report said, declaring there is a vital need for innovation and experimentation with new kinds of educational programs.

The National Center for Health Education would be a private, nonprofit organization authorized by Congress and financed from U. S.



*the same hat  
doesn't fit everyone*



We wear the hats of Democrats, Republicans and Independents. But, we're all physicians and we are all concerned. Concerned about legislation which could lead to the destruction of the fee for service concept . . . or the physician-patient relationship . . . or the quality of health care . . . and a lot of other things. That's why we decided to do something . . . to get involved. Some of us just offer our dues dollars while others actually get out and get involved in the campaigns of people we would like to see get elected. In 1972, we helped elect 203 people to Congress that don't want to destroy the American health care system.

Why not do your part?

Join us in 1973 . . . and bring along a friend.



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POLITICAL ACTION COMMITTEE—TENNESSEE  
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A copy of our report, filed with the appropriate supervisory officer is (or will be) available for purchase from the Superintendent of Documents, United States Government Printing Office, Washington, D. C. 20402.



and private funds at an estimated yearly cost of about \$3 million. The Center would be managed by a 25-member board of directors appointed by the President and confirmed by the Senate. It would conduct research, coordinate state and local and national public education programs, and serve as an information clearing house.

Chairman of the advisory committee, which spent two years on the report, is R. Heath Larry, vice chairman of U. S. Steel. There were two outright dissents on the report's findings and eight additional views which included expressions of reservations about the report.

In addition to the National Center, the President's Committee recommended:

- An HEW office serve as focal point for government-wide health education efforts.

- Consumers be more adequately informed about the health value of products and services.

- Hospitals provide patient education programs.

- Model state health education laws.

- Business, labor be encouraged to undertake comprehensive health education programs.

- Community health education centers be established.

- Serious consideration be given to preparing selected non-professional health educators as "paramedics, in effect, in the field of health education."

Joseph Beirne, president of the communications workers (AFL-CIO), said the proposed center wouldn't work and that a firm commitment to the goals of health education is needed from four groups that would be the key to success: American Medical Association, American Hospital Association, American Public Health Association, and American Dental Association.

The other dissenter was Joy Cauffman, Ph.D., University of Southern California School of Medicine, who said the report discriminates against the coalition of national health organizations.

J. Henry Smith, president of the Equitable Life Assurance Society, said he was "uneasy" about the report's lack of clarification on how the Center would be set up and the "somewhat cursory" recommendations in other areas. Charles A. Stegfried, vice chairman of Metropolitan Life Insurance Company, said "numerous recommendations are made for extensive new activities without any clear indication of

just what they might accomplish, what they would likely cost, or whether the hoped-for improvements would be commensurate with the cost."

\* \* \*

President Nixon has won a showdown with Congress on health spending. The House failed to override his veto of the emergency medical services bill, making the veto stand and bolstering the administration's hopes of curbing federal spending this year.

The Senate voted before the August recess to overturn the veto.

In the interval, pro-Administration and anti-Administration forces and supporters of the bill worked hard to line up House votes for their sides in what was regarded as an important test of the President's powers.

The bill authorized \$185 million over three years to aid state and local governments to set up emergency medical services to cope with auto crashes and the like. In his veto message, President Nixon said the measure would establish "a large new federal program in an area which is traditionally a concern of state and local governments."

The chief executive also criticized a rider to the bill ordering the continued operation of eight public health service hospitals. He said "their inpatient facilities have now outlived their usefulness to the federal government."

Despite the Administration's opposition, the bill sailed through Congress by overwhelming votes.

The House vote on the veto was viewed as a key battle in the legislative war pitting congressional democrats against the Administration, a fight not only involving the issue of economy in government but the powers of Congress and the powers of the executive branch.

President Nixon had been successful in four previous vetoes this year.

\* \* \*

Labor's leading proponent of a sweeping National Health Insurance bill, Leonard Woodcock of the United autoworkers, engineered a tentative agreement with the Chrysler corporation requiring the company to pay the full workers' tab for any National Health Insurance plan that comes down the pike.

It was believed to be the first such provision in a major labor settlement and made clear labor leaders' desire to have management shoulder the full cost of NHI. The agreement made



dollars and sense from the standpoint of the UAW, but took some of the gloss off the repeated Woodcock assertions before congressional committees that workers are willing to pay their fair share of any national health program.

Steven Schlossberg, UAW's general counsel, was quoted as saying that autoworkers have always supported NHI but "now they have even more incentive to press for its passage since, because of the new contract, there is no economic incentive for them to be against it."

The agreement states that in the event a National Health Insurance program is enacted Chrysler will be required to pay any direct premium or taxes which may be levied on workers.

## medical news in tennessee

### Killer—Inborn Genetic Defects (December 17, 8-9:30)

*See October issue of the JOURNAL for a list of stations carrying this series.*

The statistics cannot convey the heartbreak: approximately seven percent of all Americans suffer from a genetic defect of some kind; millions more carry genes that cause these defects; an estimated 25 percent of all hospital admissions are related to a genetic defect.

Although genetic defects can be as minor as baldness or slight vision problems, they can be—and often are—so serious as to pose ethical and moral questions as well as health questions.

Should screenings for a disease in a fetus be mandatory? If so, must the mother opt for abortion? Do you tell a pregnant woman and her husband they are carriers of sickle cell anemia and there is a one in four chance their child will have this serious disease, even though nothing can yet be done about it?

Many genetic diseases can be called "ethnic." For example, sickle cell anemia, originally an immunity factor against malaria, is a disease that primarily afflicts blacks whose origins lie in Africa. Cooley's anemia, or thalassemia, strikes persons of Mediterranean descent, with incidence highest among Greek and Italian Americans in the U.S. Tay Sachs disease is a killer of Jewish children of Eastern European ancestry, whereas cystic fibrosis attacks persons whose ancestors came from western European coun-

tries. In fact, virtually everyone is a potential carrier of from five to eight diseases and predisposition has been cited as important in a number of diseases, such as diabetes, cancer, heart disease and mental disorders.

Scientific and medical advances in diagnosis and, in some cases, treatment of genetic diseases have been made. But the moral and ethical problems cannot be left in the hands of scientists alone.

The role the individual and the community can play in regulating and improving methods of screening and treatment of genetic disorders is considered in the Inborn Genetic Defects program in "The Killers" series.

## personal news

DR. LOUIS J. BERNARD, Nashville, has been named chairman of the department of surgery at Meharry Medical College.

DR. LLOYD C. ELAM, president of Meharry Medical College, will deliver the "state of the college" address at the fall convocation in the Kresge Learning Resources Center auditorium.

DR. MICHAEL E. GLASSCOCK, III, Nashville, has presented an exhibit at the American Academy of Ophthalmology and Otolaryngology which won third place bronze medal for scientific presentation.

DR. ALDEN H. GRAY, Kenton, has won the Kenton Jaycees' Distinguished Service Award for 1973.

DR. RALPH MORTON, Kingsport, has resigned his administrative positions at both Holston Valley Community Hospital and the new Indian Path Hospital.

DR. WALTER PYLE, Franklin, was recently honored at the American Academy of Family Physicians in Denver, Colorado, by being made a Fellow of that organization.

DR. GENE STOLLERMAN, Memphis, has been named by the U.S. Public Health Service to serve as national chairman for an advisory panel evaluating bacterial vaccines.

DR. HARWELL WILSON, Memphis, Professor and Chairman of the Department of Surgery at the University of Tennessee Medical Units was recently honored by his former surgical residents, colleagues and friends with the establishment of the Harwell Wilson Surgical Lectureship of the University of Tennessee. Dr. Wilson recently participated in the scientific program of the International Surgical Society meeting in Barcelona, Spain where he presented a paper concerning the biologic nature and diagnosis of Carotid Body Tumors.

DR. LUIS G. BRITT, Memphis, Professor of Surgery at the University of Tennessee, has been named first president of the Harwell Wilson Surgical Society.



New Fellows in the American College of Cardiology are HARRY L. PAGE, JR., Nashville; and WILLIAM S. STONEY, JR., Nashville.

The following Tennessee physicians have been named Fellows in the American College of Surgeons: DRS. JOHN F. BOXWELL, HATHAWAY K. HARVEY, YUTAKA KATO, and WILLIAM C. PATTON of Chattanooga; DR. CHARLES B. ROMAINE, JR., of Cleveland; DR. LAWRENCE D. MULLINS, of Erwin; DR. S. LANE BICKNELL of Jackson; DR. ROBERT H. COLLIER, JR. of Knoxville; DR. JOE F. BRYANT of Lebanon; DR. JOHN R. FURMAN of Madison; DR. JAMES M. CALLAWAY of Maryville; DRS. JAMES L. CANALE, RICHARD C. CHEEK, CHARLES E. COUCH, THOMAS A. CURREY, PAUL W. ELSEA, EDGAR R. FRANKLIN, WILLIAM C. GRANT, ALBERT J. GROBMYER, III, WAYNE MARTIN, DOWEN E. SNYDER and VAN R. WILLIAMS of Memphis; DR. J. PAUL ABERNATHY of Murfreesboro; and DRS. WALLACE H. FAULK, JR., JOHN N. HENRY, and CLARENCE S. THOMAS, JR. of Nashville.

announcements

CALENDAR OF MEETINGS  
STATE

1974  
Jan. 18-19 Tennessee Regional Meeting, American College of Physicians, Holiday Inn Vanderbilt, Nashville, Tenn.

NATIONAL

1973  
Dec. 1-4 American Society of Hematology. Conrad Hilton Hotel, Chicago  
Dec. 1-5 American Medical Association. Anaheim, Calif.  
Dec. 1-6 American Academy of Dermatology. Palmer House, Chicago  
Dec. 3-5 Southern Surgical Association. The Homestead, Hot Springs, Va.  
Dec. 6-7 American College of Chemosurgery. Palmer House, Chicago  
Dec. 13-16 American Psychoanalytic Association. Waldorf-Astoria Hotel, New York  
1974  
Jan. 15-17 American Society of Surgery of the Hand, Hilton Hotel, Dallas  
Jan. 19-23 American Academy of Allergy, Americana, Bal Harbor, Fla.  
Jan. 19-24 American Academy of Orthopaedic Surgeons, Fairmont Hotel and Convention Center, Dallas  
Jan. 25-27 Southern Radiological Conference, Grand Hotel, Point Clear, Ala.  
Jan. 28-30 Society of Thoracic Surgeons, Century Plaza, Los Angeles

Valley Psychiatric Hospital

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A member of the Tennessee Hospital Association and the American Hospital Association.

Inquiries: Davis G. Garrett, M.D., Medical Director





## continuing education opportunities

*The continuing medical education accreditation program of TMA, has full approval by AMA's Council on Medical Education. If the continuing medical education program of your hospital or medical society is accredited by TMA's committee, you may receive for your attendance at its functions Category 1 credit for the AMA Physician's Recognition Award. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee 37203.*

### **Memphis Site of Four-Day Physician Seminar on Care of Injured, Nov. 14-17, 1973**

A four-day seminar on "Life-Saving Measures for the Critically Injured" will be sponsored by the American College of Surgeons' Committee on Trauma and the department of surgery of The University of Tennessee College of Medicine, Memphis, Tenn., on November 14-17, 1973. It is designed particularly for rural and general practitioners.

Topics will include Assessment of the Critically Injured Patient; Pathophysiology of Shock—Clinical Correlations; Overview of Management of Critically Injured and Avoiding Medico-Legal Problems in the Critically Injured; Ventilation of the injured patient; Initial care of soft tissue wounds; Care of the multiple injury patient; Pulmonary physiology; Injuries of the lower extremity, abnormal injuries, head and spinal cord injuries; Fractures and dislocations; Blood and electrolyte replacement in the severely injured; Burns; Trauma and renal function; Coagulation and transfusion problems; The injured child; etc.

This seminar is approved by the American Medical Association for credit toward Physician's Recognition Award, by the American College of Emergency Physicians for continuing education credit for members, and by the American Academy of Family Physicians for 27 hours of credit.

For further information contact:

Dr. Harwell Wilson, professor and chairman  
Department of Surgery, University of Tennessee  
Memphis, Tennessee 38103

For housing: Holiday Inn, 969 Madison Ave.  
Memphis, Tenn. 38104—or—  
Sheraton Motor Inn, 889 Union Ave.  
Memphis, Tenn. 38103

### **American Association for Clinical Immunology and Allergy**

The American Association for Clinical Immunology

and Allergy will hold its annual meeting at the Hilton Palacio Del Rio Hotel, San Antonio, Texas, on November 29-December 2, 1973.

Please direct inquiries to the Program Chairman:

Robert J. Brennan, M.D.

President-Elect

American Association for Clinical

Immunology and Allergy

3471 N. Federal Highway

Ft. Lauderdale, Fla. 33306

### **Medical College of Georgia CME Courses**

Date	Title, Location
1974	
January 24-25	Clinical Psychiatry, Medical College of Georgia, Augusta, Ga.
February 6-8	Basic Electrocardiography, Medical College of Georgia, Augusta, Ga.
February 7	Medicine and Religion, Medical College of Georgia, Augusta, Ga.
February 14-15	Neurology in Adults and Children, Medical College of Georgia, Augusta, Ga.
March 21-23	Geriatric Problems in Family Practice, Medical College of Georgia, Augusta, Ga.
March 28-29	Gastroenterology, The Atlanta Marriott, Atlanta, Ga.
June 13-15	Internal Medicine, Buccaneer Motor Lodge, Jekyll Island, Ga.

### **Professional Education Films Available**

NEW professional education films available in 16mm, color, from the American Cancer Society, 2519 White Avenue, Nashville, Tennessee 37204 are:

MELANOMAS: DIAGNOSIS AND TREATMENT  
PRIMARY CANCER OF BONE

NURSING MANAGEMENT OF THE PATIENT  
RECEIVING RADIATION THERAPY

### **American College of Physicians Announces Regional Meetings, Postgraduate Courses**

The ACP's one-to-three day Regional Meetings are designed to help practicing internists (and physicians in related specialties) keep abreast of new developments on the basic sciences and clinical medicine. They bring new advances in medical research from major research centers to local internists not able to travel to medical meetings outside of their own state and also provide a means for practitioners in the region to report to their colleagues on investigative



work and clinical experiences of their own.

Averaging two-to-three days in duration, the ACP Postgraduate Courses provide opportunities for in-depth study of a wide range of subjects of importance to practicing physicians.

*North Carolina Regional Meeting*, Dec. 6, 1973, Duke Medical Center, Durham, N.C. INFO: Joseph B. Stevens, M.D., 1017 Professional Village, Greensboro, N.C. 27401

*Tennessee Regional Meeting*, Jan. 18-19, 1974, Holiday Inn-Vanderbilt, Nashville, Tenn. INFO: Gerald I. Plitman, M.D., 1734 Madison Ave., Memphis, Tenn. 38104

*Mississippi-Louisiana Regional Meeting*, Feb. 15-16, 1974, Broadwater Beach Hotel, Biloxi, Miss. INFO: Guy D. Campbell, M.D., Veterans Administration Hospital, 1500 E. Woodrow Wilson Ave., Jackson, Miss. 39216

*Alabama Regional Meeting*, May 10-12, 1974, Point Clear, Alabama. INFO: Alwyn A. Shugerman, M.D., 1815 11th Ave., S., Birmingham, Ala. 35205

## Network for Continuing Medical Education Schedule of Upcoming NCME Programs

Nov. 19-  
Dec. 2      **HEARING LOSS: A THREAT AT ANY AGE**, with Merrill Goodman, M.D., Director of Otolaryngology at Long Island Jewish—Hillside Medical Center and Medical Director of the Long Island Hearing and Speech Center, New York.

**TIBETAN MEDICINE: A THOUSAND-YEAR-OLD PRACTICE**, with Donald G. Dawe, Th.D., Professor of Theology, Union Theological Seminary, Richmond, Virginia; and James L. Mathis, M.D., Professor and Chairman of the Department of Psychiatry, Medical College of Virginia; William Regelson, M.D., Professor and Chairman, Department of Psychiatry, Medical College of Virginia; William Stepka, Ph.D., Professor of Pharmacognosy, School of Pharmacy, all of Virginia Commonwealth University, Richmond, Virginia.

**NUCLEAR MEDICINE AND THE COMMUNITY HOSPITAL**, with Alexander D. Crossett, Jr., M.D., Director, Division of Radiation Therapy and Nuclear Medicine at Overlook Hospital, Summit, New Jersey.

Dec. 3-  
Dec. 16      **EMERGENCY CLOSED TUBE THORACOSTOMY**, produced by the Center for Continuing Medical Education, Ohio State University College of Medicine in Columbus, Ohio.

**DIAGNOSING AND TREATING STRABISMUS**, with Virginia Lubkin, M.D., Ophthalmologist and Clinical Assistant Professor of Ophthalmology at

Mt. Sinai School of Medicine in New York City.

**DRUG INTERACTION: The CASE OF THE PUSHY ANTIBIOTIC**, with Harold C. Neu, M.D., Chief, Infectious Diseases, Columbia University College of Physicians and Surgeons, New York.

Dec. 17-  
Dec. 30

**DIAGNOSTIC THORACENTESIS—PRINCIPLES/METHODS**, produced by the Center for Continuing Medical Education, Ohio State University College of Medicine, Columbus, Ohio.

**LYMPHANGIOGRAPHY IN DIAGNOSIS AND THERAPY**, with Robin Caird Watson, M.D., Chairman, Department of Diagnostic Radiology, Memorial Sloan-Kettering Cancer Center, and Associate Professor of Radiology, Cornell University Medical Center, New York.

**DIAGNOSING COMMON EYE INFLAMMATIONS**, with Virginia Lubkin, M.D., Ophthalmologist and Clinical Assistant Professor of Ophthalmology at Mt. Sinai School of Medicine, New York.

For more information on NCME, write The Network for Continuing Medical Education, 15 Columbus Circle, New York, New York 10023.

See September issue of the *JOURNAL* for programming details.

## 1973 POSTGRADUATE COURSES Postgraduate Courses

The American College of Physicians Postgraduate Courses are arranged through the cooperation of the directors and institutions involved. Tuition fees, in varying amounts, are charged for each course. For further information and registration forms, write to: Registrar ACP Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

### November

*Human Hypersensitivity Disorders: Clinical Aspects and Pathogenetic Mechanisms*, Nov. 28-30, 1973, University of Michigan Medical Center, Ann Arbor, Mich.

### December

*Current Concepts of Clinical Infectious Diseases*, Dec. 5-7, 1973, University of Virginia School of Medicine, Charlottesville, Va.

## Tutorial on Management of Early Cervical Neoplasia

The third tutorial on management of the patient with early cervical neoplasia will be held November 30 through December 1, 1973 at the Center for Continuing Education at the University of Chicago. This course is especially designed for the gynecologist, obstetrician, pathologist and interested medical practitioner, and provides an integrated approach to problems of management of patients with early cervical

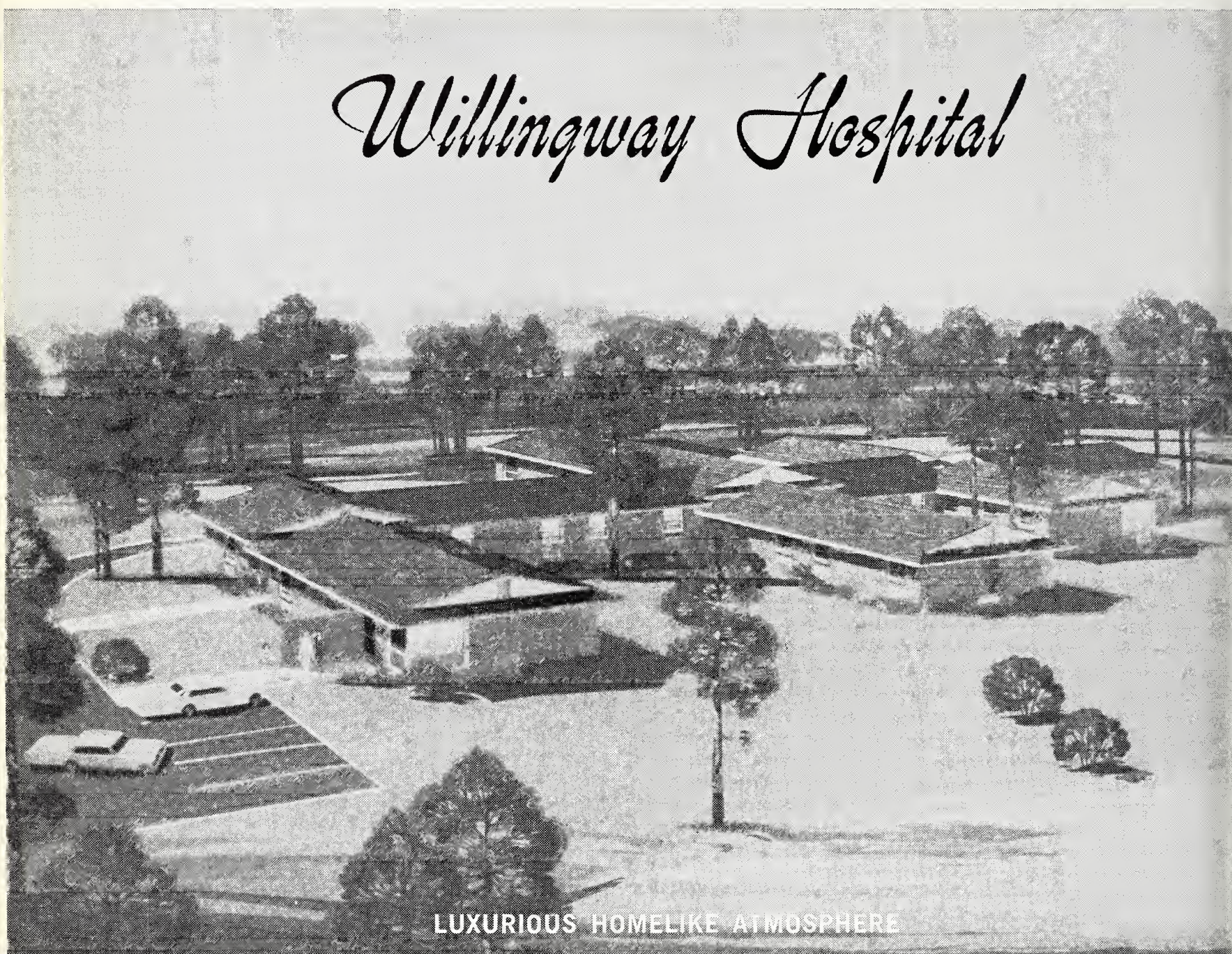


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neoplasia. The course will consist of theoretical and practical sessions, panel discussion, discussions in small groups, and colposcopy seminars which should familiarize the physician with current methods and practices of early cancer detection. Classification of lesions depending on cyto- and histopathologic criteria will also be presented. For further information, contact: The University of Chicago, Center for Continuing Education, 1307 E. 60th Street, Chicago, Illinois 60637.

## Vanderbilt University CME Course Listings

1974

*3rd Annual Dragstedt Surgery Symposium and Edwards Memorial Lecture* .....Jan. 25-26  
*High Risk Pregnancy and Newborn Care* .....March  
*Venereal Disease: A New Look at Treatment*

Tenn. Dept. of Public Health; U. of Tennessee;

Meharry Medical College .....March 16  
*Diabetes: 1974* .....April

*13th Annual Seminar in Psychiatry*

Central State Psychiatric Hospital; Tenn. Dept.

of Mental Health; Meharry Medical College ... May

For further information contact:

Paul E. Slaton, M.D., Director

or

Marilyn Short, Administrative Associate

Vanderbilt Continuing Education

1100 Baker Bldg., 110 21st Avenue South

Nashville, Tennessee 37203 Tel. 615-322-2716

## Clinical Training Program For Practicing Physicians

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

## Participating Departments and Divisions

Anesthesiology .....Bradley E. Smith, M.D.  
 Medicine .....Grant W. Liddle, M.D.

Cardiology .....Gottlieb C. Friesinger, III, M.D.

Chest Diseases .....James D. Snell, M.D.

Dermatology .....Robert N. Buchanan, Jr., M.D.

Endocrinology & Diabetes ..Grant W. Liddle, M.D.

Gastroenterology .....Steven Schenker, M.D.

Hematology .....Robert C. Hartmann, M.D.

Infectious Diseases .....Zell A. McGee, M.D.

Renal Diseases .....H. Earl Ginn, M.D.

Clinical Pharmacology .....John A. Oates, M.D.

Neurology .....Gerald M. Fenichel, M.D.

Obstetrics & Gynecology .....Paul W. Griffin, M.D.

Pathology .....Virgil S. LeQuire, M.D.

Pediatrics .....David T. Karzon, M.D.

Psychiatry .....Marc H. Hollender, M.D.

Radiology .....John R. Amberg, M.D.

Surgery

General .....H. William Scott, Jr., M.D.

Neurological .....William F. Meacham, M.D.

Ophthalmology .....James H. Elliott, M.D.

Oral .....H. David Hall, D.M.D.

Pediatric .....James A. O'Neill, M.D.

Plastic .....John B. Lynch, M.D.

Thoracic & Cardiac .....Harvey W. Bender, M.D.

Urology .....Robert K. Rhamy, M.D.

Cancer Chemotherapy ..Vernon H. Reynolds, M.D.

ELIGIBILITY: All licensed physicians are eligible.

ADMINISTRATIVE FEE: \$200.00 per week.

CREDIT: American Medical Association Physicians Recognition Award and American Academy of Family Physicians Continuing Education accreditation.

APPLICATION: For further information and application, contact:

Paul E. Slaton, M.D., Director, Continuing Education

1100 Baker Bldg., 110 21st Avenue South

Nashville, Tenn. 37203 Tel. 615-322-2716

## Tennessee Internal Medicine Specialists To Meet January 18-19

Specialists in internal medicine and related medical fields will hold a two-day scientific meeting on January 25-26, 1974, at the Holiday Inn-Vanderbilt, Nashville, Tennessee.

Prime purpose of the American College of Physicians, which is headquartered in Philadelphia, Pa., is the continuing education of practicing physicians. In addition to Regional Meetings, it sponsors a five-day national meeting, postgraduate courses and publishes the monthly *Annals of Internal Medicine*.

In charge of arrangements for the ACP Tennessee Regional Meetings of the American College of Physicians is Gerald I. Plitman, M.D., Memphis, Tenn., who serves as the ACP's representative in the State of Tennessee.

## Department of Otolaryngology and Maxillofacial Surgery University of Tennessee

2nd Annual Symposium—Current Management of Laryngopharyngeal Disorders—December 7-9, 1973.  
 Otolaryngology for the Family Physician—December 15-16, 1973.

## Georgetown University Hospital

The Department of Psychiatry at Georgetown University Medical Center announces a Postgraduate Program for non-psychiatrist physicians in Family and Systems Theory and Family Psychotherapy. The course will meet quarterly in three-day sessions beginning in January, 1974. More detailed information may be obtained by contacting Murray Bowen, M.D., Department of Psychiatry, Georgetown University Medical Center, Washington, D.C. 20007.



## Current Obstetric and Gynecologic Practice

Department of Obstetrics and Gynecology  
The University of Texas Medical School at San Antonio  
Postgraduate Course—January 24-30, 1974

The course, given in 3 parts, is designed primarily as an aid to candidates for the American Board examination, but will be useful to practicing physicians who desire a resume of modern clinical practices in obstetrics and gynecology.

Part I—Gynecologic Pathophysiology and Oncology.

Part II—Gynecologic Endocrinology and Genetics.

Part III—Obstetrical Pathophysiology.

The \$250 enrollment fee includes a study set of 35mm Kodachrome slides, furnished to each registrant for home study in advance of the course, and cocktails and dinner on Saturday night, January 26.

The course will be limited to 150 students. Registration must be made by December 1, 1973. For further details and to register, write to C. J. Pauerstein, M.D., Dept. Ob-Gyn, the University of Texas Medical School at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284.

## Seminar in Pediatric Nephrology: Current Concepts in Diagnosis and Management

A Seminar in Pediatric Nephrology is being presented by the Department of Pediatrics at the University of Miami School of Medicine in Miami on January 2-5, 1974 at the Eden Roc Hotel, Miami Beach, Florida.

A comprehensive review of major problems in Pediatric Nephrology will be presented. Pathogenesis, pathology, clinico-pathological correlations, functional derangements and treatment of glomerulopathies structural defects and infections, and chronic uremia will be emphasized.

Inquiries should be directed to:

Division of Continuing Education  
University of Miami School of Medicine  
P.O. Box 875 Biscayne Annex  
Miami, Florida 33152  
(Tel. A/C 305, 350-6716)

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# Rondomycin<sup>®</sup> (methacycline HCl)

**CONTRAINDICATIONS:** Hypersensitivity to any of the tetracyclines.

**WARNINGS:** Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

**Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

**Usage in newborns, infants, and children.** (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in premature given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

**PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

**ADVERSE REACTIONS: Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

**Skin:** maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

**Renal toxicity:** rise in BUN, apparently dose related (See **WARNINGS**).

**Hypersensitivity:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

**Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**USUAL DOSAGE: Adults**—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

**Children**—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

**Concomitant therapy:** Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

**SUPPLIED:** 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 6/73



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## Julius Caesar, Estes Kefauver and the FDA

*"The evil that men do lives after them,  
The good is often interred with their bones."*  
Act III, Sc. 2, Line 79.

Estes Kefauver must have accomplished some good along the way, otherwise the citizens of Tennessee would not have elected him to the United States Senate, but the evil he did as chairman of the committee dealing with drug matters continues to plague the medical and pharmaceutical world. The January 8 issue of *Newsweek* contains an article by Milton Friedman that explains, in part, the capricious and domineering course the Food and Drug Administration has followed during the past decade.

The Kefauver hearings and the thalidomide tragedies (the latter, of course, did not occur in this country) prompted Congress in 1962 to require the FDA to apply stiffer standards for the approval of drugs. Friedman pointed out that this mandate placed the FDA officials in the unenviable position of possibly approving a drug that might have unanticipated side effects with dangerous potential, or refusing to approve a drug that might be capable of saving many lives. If the first error was made, the media of the nation would hasten to publicize the mistake and the FDA officials would be held up to public censure. If, on the other hand, a life saving drug was denied, and from its lack, thousands might perish as a result of this decision, this blunder, in all probability, would not become general knowledge, and the FDA would still be home free.

Which alternative would a politician take? Need we answer! In the eyes of the FDA every new drug is suspect, and there has been a natural curb on research by the pharmaceutical industry. A recent address by Professor Sam Peltzman, an economist at UCLA, pinpointed the reluctance of larger drug houses to embark on time-consuming and costly research under present restrictions. "In the twelve years prior to 1962, 41.5 'new chemical entities'—that is, really new drugs—were introduced on the average each year; in the next eight years, 16.1. And

their introduction was delayed by two years on the average."

Peltzman estimated that the 1962 drug amendments, as interpreted by FDA, "cost consumers of drugs—over and above any benefits—\$250 to \$500 million per year at a very minimum. This is 5 to 10 per cent of the money spent annually on drugs. It is as if a 5 to 10 per cent tax were levied on drug sales and the money so raised were spent on invisible monuments to the late Senator Kefauver." And it might be added that no mention has been made of the cause of this wastage or the extent of these additional health expenditures by the current Senator Kennedy, who constantly harps upon medical costs and emphasizes that the government can do it both better and cheaper.

All that Friedman and Peltzman have told us is provocative and exasperating but after all it is understandable, for human nature is much the same everywhere, and especially so in Health, Education and Welfare, and in its numerous subsidiary empires and bureaucracies. But the question that passes all understanding is why drugs that have stood the test of time are also arbitrarily banned and withdrawn from circulation.

There is a ground swell of resentment on the part of practicing physicians throughout this country that bodes ill for the "arm chair" physicians who fear to compete with their fellow men and retire to the anonymity of a desk in FDA. On January 7 Councilors from the First, Second, Seventh and Tenth Districts spoke to a motion made by Dr. W. Leonard Weyl, and passed unanimously by Council, that The Medical Society of Virginia "strongly object to FDA's policy of removing medications from the market without prior consultation with those physicians who compose the practicing community." It was further urged "that such consultations always be held before final action leading to withdrawal is taken."

Dr. James C. Respass of the University reported that the Albemarle County Medical Society had expressed strong desire that *Dolophine Syrup* continue to be available by prescription as an anti-tussive agent. Dr. Raymond S. Brown, of Gloucester, urged that *Polymagma* be not removed from the pharmacopeia and Dr. Charles E. Davis, Jr., of Norfolk, spoke strongly against the arbitrary withdrawal of both *Sulfathalidine* and *Sulfasuxidine*. The latter two drugs have been the chief mainstay in colon surgery for the past three decades and have played a major



role in reducing the mortality following bowel resections to a fantastically low level.

The highhanded manner in which this decision was handled is reflected in a letter Dr. Davis received from the manufacturer of these preparations. They were "caught by surprise, very much as you (Dr. Davis) have been, due to the fact that no communication was delivered . . . prior to the publication of the intention of the Food and Drug Administration to order the discontinuance of these products because the NAS-NRC Committee classified them as '*less than effective*.' The classification was handed down in spite of the great amount of use of these products by physicians and surgeons for many, many years."

Reverting to Shakespeare "Upon what meat doth this our Caesar feed, that he is grown so great?"

The leading guest editorial in this issue, prepared by Dr. William J. Hagood, Jr., of Clover, and Speaker of the House, epitomizes the feeding of practitioners throughout the State. Numer-

ous letters are being forwarded to our senators and congressmen and the more they receive the more sensitive FDA will become. Nothing makes an administrator squirm like a letter from the "Hill." This editorial can best be concluded by quoting the final paragraph in Milton Friedman's article captioned:

"Should FDA Be Abolished?"

"The 1962 amendments to the Food, Drug, and Cosmetic Act should be repealed. To comply with them, FDA officials must condemn innocent people to death. In the present climate of opinion, this conclusion will seem shocking to most of you—better attack motherhood or even apple pie. Shocking it is—but that does not keep it from also being correct. Indeed, further studies may well justify the even more shocking conclusion that the FDA itself should be abolished."

HARRY J. WARTHEN, M.D.

Reprinted from the Virginia Medical Monthly, March, 1973.

\* \* \*

## SAINT ALBANS PSYCHIATRIC HOSPITAL

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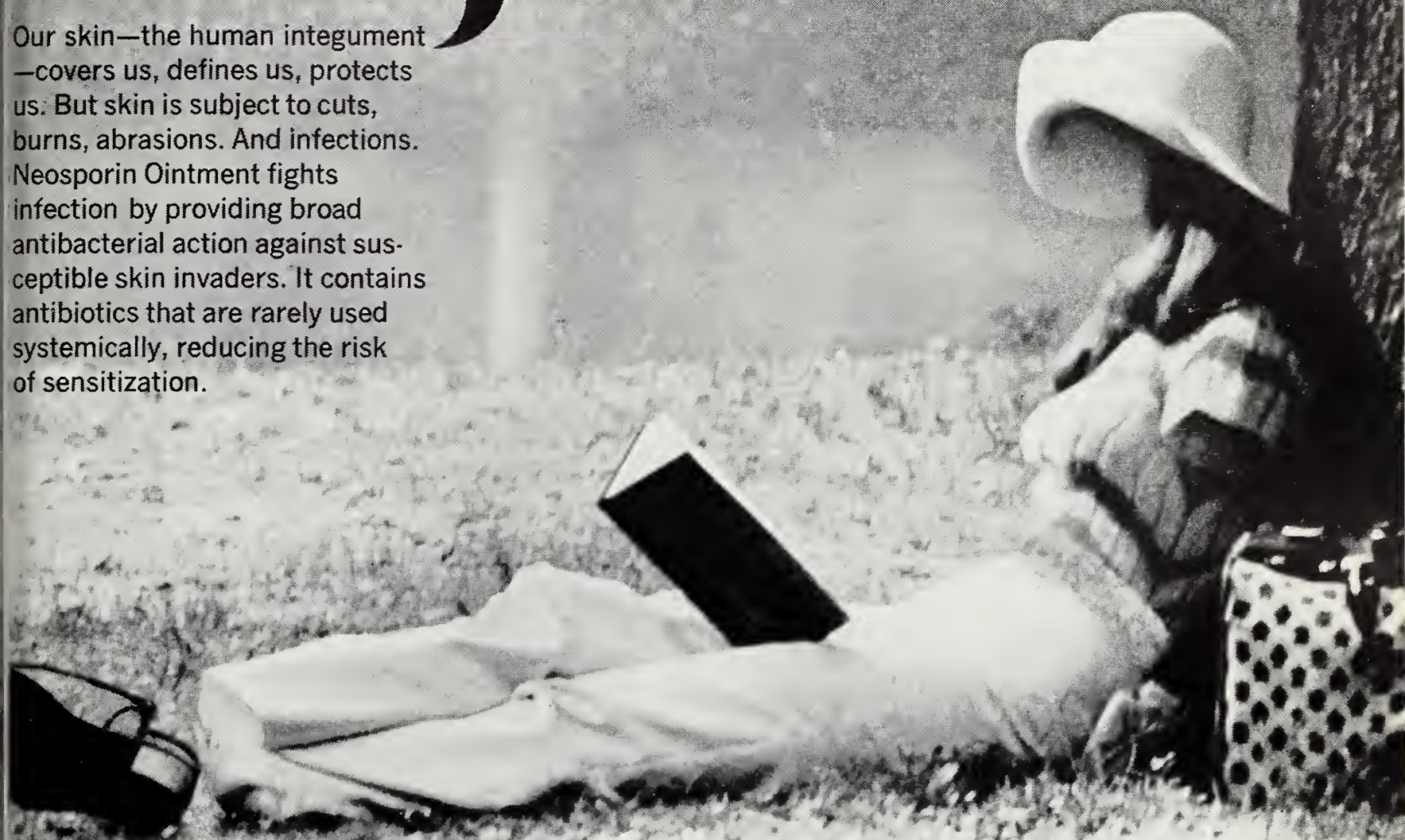
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# Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.



**INDICATIONS:** *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in:

- infected burns, skin grafts, surgical incisions, otitis externa
- primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia)
- secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis)
- traumatic lesions, inflamed or suppurating as a result of bacterial infection.

*Prophylactically*, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

**PRECAUTION:** As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

## NEOSPORIN<sup>®</sup> Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin<sup>®</sup> brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ¼ oz. (approx.) foil packets.



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## from the regional medical programs

### RMP Moves Ahead; Seeks New Proposals

Tennessee Mid-South Regional Medical Program, whose life was extended for an additional year by Congress in June, is back in operation, according to Dr. Richard Cannon, Director.

"We have been awarded \$466,830 for the initial six month period through December 31, 1973, and these funds have been committed to 11 projects in the areas of quality assurance, emergency medical service, hypertension, manpower resources and primary care.

Currently, we are accepting proposals for short term projects," Cannon said.

Projects which can be funded should fall within the newly established priority areas: strengthening local planning resources, strengthening local quality assurance efforts, emergency medical services, kidney disease, and hypertension.

Favored projects will be those that reflect cooperative financing and where a plan exists for support after RMP funds are terminated.

Projects which are to be funded out of the initial six month monies are: 1) Quality of Care Assurance Program, Tennessee Admission Review Program (TARP), a pilot program sponsored by the Tennessee Foundation for Medical Care, Inc. in cooperation with the Tennessee Department of Public Health.

2) Upper East Tennessee and Pennyriple, Kentucky Emergency Medical Services System.

3) Regional Program for Improved Control of Hypertension, Vanderbilt University.

4) Southeast Tennessee Community Health Services Education Program, Chattanooga and the Mid-East Tennessee Health Services Education Program, Knoxville.

5) Regionalization of High-Risk Newborns, Vanderbilt University.

6) Knoxville Comprehensive Health Services.

7) Nurse Clinician for Primary Health Care, Bradley County.

8) High Risk Obstetrics, Vanderbilt University.

Other projects which were authorized to continue through December 31, 1973 within the approved phase out plan are:

1) Alton Park Hypertension Project, Chattanooga.

2) Infant Intensive Care Project, University of Tennessee Memorial Research Hospital, Knoxville.

3) Primex Demonstration, Vanderbilt University School of Nursing.

4) Hospital Trustees and Middle Management Program.

Dr. Cannon said the Regional Advisory Group met on September 19, 1973, and approved the revised Bylaws and reconstituted the Regional Advisory Group membership accordingly.

Dr. Curtis P. McCammon, Medical Director, University of Tennessee Memorial Research Center and Hospital, Knoxville, was elected chairman of the group. Others elected were: Dr. J. Jefferson Bennett, Vice-Chancellor and President, University of the South, Sewanee, vice chairman; and Mrs. Carol Ballard, R.N., Algood; Dr. Charles Clark, Murray, Kentucky; Colonel William Eledge, Etowah; Dr. John D. Hopkins, Nashville; Dr. Lloyd Ramsey, Nashville; Dr. John B. Thomison, Nashville; and Dr. Harry Waggoner, Johnson City, as members of the Executive Committee.

Newly elected members to serve on the group include: Ms. Marion Blakeley, Director of Nursing, Jennie Stuart Memorial Hospital, Hopkinsville, Kentucky; Dr. John E. Chapman, Acting Vice Chancellor for Medical Affairs, Vanderbilt University, Nashville; Dr. David C. Conner, Tennessee Society of Osteopathic Physicians and Surgeons, Hixon; Mr. Harmon Cooter, United Mine Workers, Knoxville; Mr. J. D. Elliott, Nashville Memorial Hospital, Madison; Dr. Gideon Fryer, East Tennessee Health Planning Council, Knoxville; Mr. Sam Kennedy, Publisher and General Manager, *Columbia Daily Herald*, Columbia; Dr. Morse Kochtitzky, President of TMA, Nashville; Sister Marie Moore, St. Mary's Memorial Hospital, Knoxville; The Honorable Travis Price, Publisher, *Springfield Herald*, and Mayor of the City of Springfield; Mr. Orten Skinner, Director, Cumberland Technical Center, Cookeville; Mr. Jack Strickland, Director, First Tennessee-Virginia Development District, East Tennessee State University, Johnson City; Dr. Stanley Vermillion, Johnson City; Dr. Lee Williams, Knoxville Neighborhood Health Service.



**American Medical Association  
Council on Environmental, Occupational,  
And Public Health**

**STATEMENT ON VENEREAL DISEASES**

Gonorrhea ranks first (excluding influenza) and syphilis third among the reportable diseases in the United States. During 1972, there were 767,215 gonorrhea cases reported, 14.5% higher nationally than the previous year and more than double the number reported in 1965. Increases have occurred in all parts of the nation and in all age and sex groups, but the largest concentration of cases is in the 15-24 year age group. Allowance for both under reporting and failure to diagnose all cases as they occur suggests that the actual occurrence of gonorrhea infection last year was about 2.5 million.

The Center for Disease Control estimates that the reservoir of gonorrhea includes 6 to 800,000 females and about 100,000 males that are asymptomatic. To help reduce this reservoir of silent carriers, most states have implemented gonorrhea screening programs for females. The Center for Disease Control reports that from July 1972 to March 1973 there were 3,117,022 females screened and 158,604 (5.1%) had a positive test for gonorrhea. Of 664,110 females tested in private physician offices throughout the nation, 2.5% had a positive culture for gonorrhea. The Council urges medical societies to promote gonorrhea culture screening among females.

During 1972, syphilis morbidity (all stages) exceeded 91,000 reported cases. The number of congenital syphilitics under one year of age numbered 383 in 1972. Reported cases of primary and secondary syphilis (the infectious stages) numbered 24,429, up 3% from the previous year, with an estimated 85,000 cases occurring annually. Because large numbers have escaped detection over the years, it is estimated that if every person in the United States could be tested for syphilis today, about 1/2 million previously untreated cases would be found.

An important procedure used to identify persons infected with syphilis or gonorrhea is laboratory reporting to public health authorities of those persons who have a positive test for

either. The patient is contacted through his own physician for diagnosis and treatment if necessary.

With the exception of Wisconsin, all the states now have laws or regulations permitting the treatment of minors for venereal disease without parental consent. It is believed, however, that some of the states' laws and regulations are so worded to make them inadequate. Also, some of the states might improve their laws by broadening the age group definition of minors.

Physicians in private practice treat approximately 80% of the syphilis and gonorrhea that comes to diagnosis but report to public health departments only one out of every eight cases of syphilis and one out of every nine cases of gonorrhea they treat. Physicians should assist public health departments by reporting the venereal disease cases they treat. Medical societies are urged to cooperate and give broad support to public health authorities. Much effort must still be made by health departments and medical societies to foster mutual trust so that public and private medicine can work effectively for the control of both syphilis and gonorrhea. Most state and some local health departments have venereal disease interviewer-investigators who can work confidentially with the patient and his contacts to determine the source and spread of his infection. The Council urges the physician to utilize the services of these trained investigators.

Adequate therapy of venereal disease, using the right forms and dosages of antibiotics, is essential. *Neisseria gonorrhoeae* has shown the ability to develop resistance to penicillin to the point where the recommended dosage now is 4.8 million units of Aqueous procaine penicillin for the treatment of gonorrhea in both males and females. It is anticipated that additional changes in treatment may have to be made from time to time as increasing resistance becomes a problem or more effective antibiotics are discovered. For this reason the Council urges that medical societies impress upon their members the need for keeping abreast of changes in the recommended therapy of the venereal diseases.

The Council encourages the publication of more articles in professional journals on venereal disease and its control for the guidance of the profession. Medical societies are asked to support education of parents and the public through more extensive and imaginative use of all available media and through school curriculum.

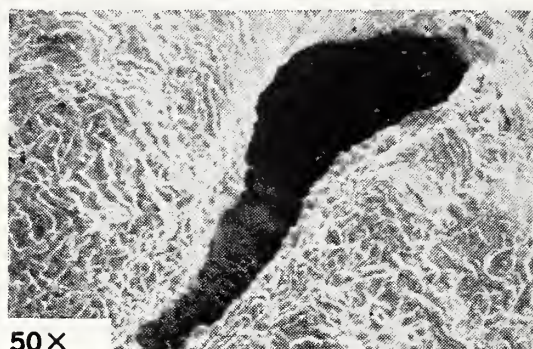


# Progress in

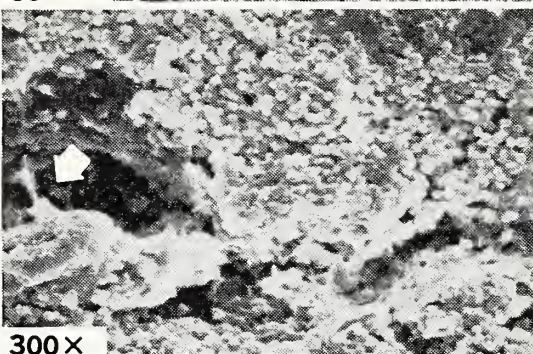
## Diagnosis

In these illustrations of tissue from a patient with acute cystitis, you can see the swollen and inflamed mucosa of the ureteral orifice (50X), a fibrin strand (300X), and a whitish exudate composed of polymorphonuclear leukocytes (1000X and 3000X). The photographs were taken with the scanning electron microscope (SEM) by Dr. Shirley Siew, Associate Professor of Pathology at the University of Pittsburgh School of Medicine. They come from the clinical exhibit "Scanning Electron Microscopy of Urinary Tract Infection," which won first prize in Clinical Research at the May 1972 meeting of the American Urological Association.

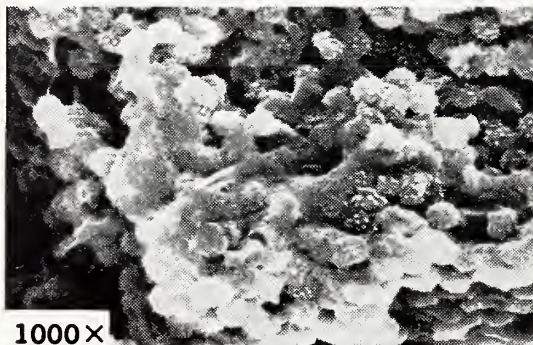
The scanning electron microscope promises to be extremely useful in its investigation of human pathology. In time, examination of tissue with the SEM is likely to play a significant role in the diagnosis of urinary tract infection.



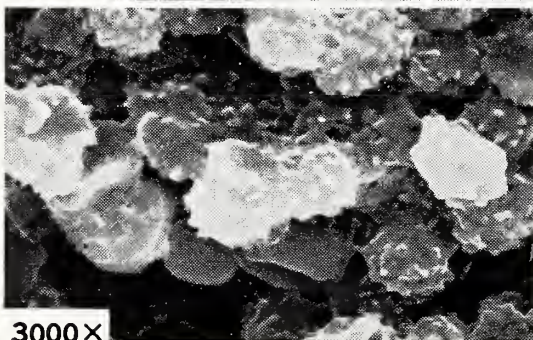
50X



300X



1000X



3000X

### A note on the photography:

These photographs were made by the scanning electron microscope, which, like the transmission electron microscope, operates on the basic principle of exposure of tissue to a beam of electrons in a vacuum. In the SEM, electrons bombard the surface of tissue which has been given a fine coating of gold. The electrons reflect off the tissue onto a television screen, and the resulting photograph shows a three-dimensional effect. The tissue sections need to be ultrathin, so there is a minimum of handling and distortion.

Just as much an instrument of progress and just as helpful in its way has been Gantrisin (sulfisoxazole) Roche, developed and introduced a generation ago. However, there's been no generation gap in its continuing usefulness. In fact, Gantrisin, with so many years of clinical experience behind it, is still one of the most valuable drugs we have for the treatment of non-obstructed cystitis, pyelitis or pyelonephritis due to susceptible organisms such as *E. coli*. Specifically, Gantrisin provides your patient with certain important therapeutic advantages:

**References:** 1. Bran, J. L.; Karl, D. M., and Kaye, D.: *Clin. Pharmacol. Ther.*, 12:525, 1971. 2. Burke, E. C., and Stickler, G. B.: *Mayo Clin. Proc.*, 44:318, 1969. 3. Hibbard, L. T., in Bulger, M. J., et al.: *Patient Care*, 1:(3) 47, 1967. 4. Holloway, W. J.; Furlong, J. H., and Scott, E. G.: *J. Urol.*, 102:249, 1969. 5. House, T. E., et al.: *Obstet. Gynecol.*, 34:670, 1969. 6. Lampe, W. T.: *J. Am. Geriatr. Soc.*, 16:798, 1968. 7. Moffat, N. A., and Wenzel, F. J.: *Curr. Ther. Res.*, 13:286, 1971. 8. Normand, I. C. S.: *Practitioner*, 204:91, 1970. 9. Pryles, C. V.: *Med. Clin. North Am.*, 54:1077, 1970. 10. Seneca, H.; Peer, P., and Warren, B.: *J. Urol.*, 99:337, 1968. 11. Trafton, H. M., and Lind, H. E.: *J. Urol.*, 101:392, 1969. 12. Cohen, M.: *Pediatrics*, 50:271, 1972.

**Before prescribing, please consult complete product information, a summary of which follows:**

**Indications:** Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms.

**IMPORTANT NOTE:** *In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections. Maximum safe total sulfonamide blood level, 20 mg/100 ml;

measure levels as variations may occur.

**Contraindications:** Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

**Warnings:** Safety in pregnancy not established. Do not use for Group A beta-hemolytic streptococcal infections, as such (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported in hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, purpura or jaundice may be early indications of serious blood disorders. Blood and urinalysis with careful microscopic



# Acute cystitis:

## Treatment

**Urinary levels** As a urinary anti-infectant, Gantrisin (sulfisoxazole) offers your patients important advantages. Therapeutic urinary and plasma concentrations are usually achieved in from 2 to 3 hours and can be maintained on the recommended 0.5 Gm/day dosage schedule that's convenient for almost all patients.

**Excellent good tolerance** Gantrisin has relatively few undesirable side effects, and serious toxic reactions are rare. Minor reactions are comparatively infrequent, but may include nausea, headache and vomiting. Even for extended periods of treatment, Gantrisin may usually be tolerated. It is effective in treating chronic or recurrent nonobstructed cystitis, pyelitis or pyelonephritis due to *E. coli* and other susceptible organisms. (See Important Note in summary of product



information.) Complete blood counts and urinalyses, with careful microscopic examination, should be performed frequently.

**High solubility** Gantrisin (sulfisoxazole) Roche is one of the most soluble of all sulfonamides, with both free and acetylated forms highly soluble in the commonly encountered urinary pH range of 5.5 to 6.5. Urine levels have been detected in

60 minutes; therapeutic levels are usually reached in from 2 to 3 hours. About 90% of a single dose is excreted in 24 to 48 hours. As with all sulfonamides, adequate fluid intake must be maintained.

**economy** Average cost of therapy is still only about 6½¢ per tablet.

**total therapy: 14 days** Recent evidence in the medical literature suggests that therapy in acute non-obstructed urinary tract infections should be continued for 10 to 14 days even if patients become asymptomatic in 2 or 3 days, as they often do.<sup>1-11</sup> However, one investigator, evaluating a 5-year study of sulfisoxazole used to treat urinary tract infection in 368 girls, found no advantage in continuing therapy more than two weeks *for a first infection*.<sup>12</sup>

**For acute, chronic or recurrent nonobstructed cystitis, pyelitis, or pyelonephritis due to susceptible organisms...**

begin with  
**Gantrisin<sup>®</sup>**  
**sulfisoxazole/Roche<sup>®</sup>**

**Usual adult dosage:** 4 to 8 tablets *stat*  
2 to 4 tablets *q.i.d.*

ation should be performed frequently.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, allergy or bronchial asthma. Nausea, frequently dose-related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Side Reactions:** *Blood dyscrasias:* leukopenia, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and hemoglobinemia; *Allergic reactions:* skin eruptions (Stevens-Johnson

syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; *Miscellaneous reactions:* Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred. Due

to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

**Supplied:** Tablets containing 0.5 Gm sulfisoxazole.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, N.J. 07110



## ANSWERS TO THE COOPER QUIZ (from page 1060)

*JAMA, December 4, 1972*

1. Plasma volume. "Studies investigating fluid volume dynamics and albumin kinetics in patients undergoing major abdominal surgery indicate that during the operation, marked deficits develop in the total red blood cell volume, plasma volume, extracellular fluid volume, and the total exchangeable albumin pool. A disproportionate deficit in the plasma volume occurring in the course of the operation is believed to be secondary to a functional extracellular fluid volume deficit and abnormal losses of albumin from the intravascular compartment. Deficits in these compartments occurred during the operation in every patient studied. In some patients the plasma volume deficit immediately postoperatively amounted to close to 50% of the volume present when the patient went into the operating room. In the course of a regional node dissection in nine patients studied, a 29% deficit developed in the total body albumin pool." (p. 1253)
2. Pancuronium bromide. "Status asthmaticus is often a difficult entity to treat in the acute phase. In spite of intensive drug therapy, some patients do not respond. It has been suggested that the use of neuromuscular blocking agents as an adjunct to accepted drug therapy be utilized to better ventilate the patient and gain time in medically irreversible status asthmaticus. Neuromuscular blocking agents have no direct action on smooth muscle and therefore have no direct role in the therapy of the asthmatic process.  
"Curare may cause histamine release with secondary bronchospasm and might tend to aggravate an already serious condition. Gallamine triethiodide may not be beneficial because it causes tachycardia and increased blood pressure; many patients in status asthmaticus are hypoxic and hypercarbic with a resultant hypertension and tachycardia. Succinylcholine chloride is not advised for prolonged paralysis because of the possible development of tachyphylaxis and the production of a desensitization (phase 2) neuromuscular block.  
"Pancuronium bromide is a new, nondepolarizing muscle relaxant which has been used in Europe for many years and is now being studied in the United States on an investigational basis. Clinical reports have shown pancuronium bromide to have no significant cardiovascular effects, ganglionic blockade, or histamine release. Four cases of status asthmaticus are presented in which pancuronium bromide was used to facilitate ventilation until the acute episode resolved." (p. 1265)
3. FALSE. "It is not suggested that neuromuscular blocking agents be used as a routine to the control of status asthmaticus. They are to be used only as adjuncts when conventional drug therapy is ineffective. Most asthmatic attacks are self-

limiting and controlled by inhalation of bronchodilator drugs. It must be emphasized that when neuromuscular blocking agents are used, sedative or amnesic agents must also be given. During the early hypoxic states associated with this condition, the patient is frequently amnesic due to hypoxia. When hypoxia is no longer present, psychic depressants or amnesic drugs should be employed." (p. 1267)

4. FALSE. "In a recent study of the natural history of focal cerebrovascular disease, Acheson and Hutchinson followed up a group of 500 patients over a mean period of 4.6 years. Three hundred forty-nine of their patients had a completed stroke when first seen, and 53% of this group went on to have further stroke episodes. One hundred fifty-one patients had histories of transient ischemic attacks only. In the 416-year follow-up period, 62% of the patients who had transient ischemic attacks went on to develop a completed stroke. Fields et al have shown that removal of carotid atheromata from patients with transient ischemic attacks results in a lower incidence of new strokes compared to a matched group of nonsurgically treated patients with transient ischemic attacks." (p. 1275)
5. FALSE. "Carotid atheromata can be found in the majority of retinal stroke patients, especially those who have no clinical evidence of cardiac embolic disease. These patients may be subject to other retinal or cerebral stroke episodes or both within four to five years of their first eye symptoms.  
"Patients with retina stroke whose history is compatible with embolization from atheromatous vascular disease can be identified easily by critical carotid arteriography. Carotid surgery may present progressive ocular and cerebral vascular occlusive disease in these patients." (p. 1275)

*December 11, 1972*

6. TRUE. "Recent work has shown that the LSD molecule is capable of altering the structure of DNA in vitro. Animal studies cited in this communication have shown the teratogenic effect of LSD when given to pregnant animals. The present report raises the possibility that exposure to LSD prior to pregnancy, as well as during pregnancy, may also result in abnormal offspring. Both teratogenesis and mutagenesis may be explained on the basis of an altered DNA." (p. 1371)
7. TRUE. "We were unable to find any young adults, admitting to the use of psychedelic drugs, who denied taking LSD. The only group in the Washington, DC area that is available for comparison with our study group is the population of one of the homes for unwed mothers. This facility accepts unwed pregnant women from all socio-economic classes and provides residential care prior to and after delivery. The outcome of these pregnancies has been monitored by one of the authors (C.B.J.) since 1962. Since then, the incidence of structural congenital defects has remained stable at six per



1,000 live births. Thus the incidence of major congenital anomalies in the offspring of a population of drug users were 96 per 1,000 live births, or 10 to 20 times that expected for the American population." (p. 1372)

EDITOR'S NOTE: If naming the American population (rather than just "human") bothers you, there is a reason. Myelomeningocele is two to three times more common in Wales and Ireland than in America.

8. Battery failure. "Although implanted pacemakers have been used for more than a decade, premature battery failure is still the most significant complication encountered. Most investigators report a 50% failure rate at 20 months after implantation.

"Unpredicted battery failure either before or near the expected life expectancy of the pacemaker can be disastrous in patients who are completely pacemaker-dependent or precipitate unnecessary emergency replacement in others. Sudden battery failure is usually associated with a recurrence of the initial symptoms, especially, Adams-Stokes syndrome, requiring immediate temporary pacing until replacement generators have been secured. The morbidity and unnecessary cost could be eliminated with the establishment of effective methods of testing for battery, generator, and electrode malfunction. Furthermore, the identification of impending battery failure may indeed reduce the number of unexpected failures to less than 10%, as 83% of pacemaker malfunctions reside with battery depletion." (p. 1379)

9. TRUE. "Other measurements of pacemaker function did not predict pacemaker failure before the alterations were first noted in pacing rate. Furthermore, frequent evaluation of pacemaker function is vital in high-risk pacer-dependent patients after the units have been in use for 15 months or more or in those patients who evidence variations in spike amplitude or duration, as seen in the pacemaker clinic. In all cases of battery failure, there was adequate time for routine replacement before the pacemaker output dropped to a critical level. In no case was emergency hospital admission required because of generator failure.

"X-ray film evaluation of the batteries was performed at the time of the first clinic visit and at six-month intervals. This examination did offer only a gross estimation of battery life and was not reliable in the long-term implants, especially those beyond 26 months. The results of this study simply say that pacemaker replacement at 18 months is no longer necessary. It further illustrates that certain pacemakers will fail at a mean time of 15 months, and in no instance can pacemakers be implanted and left unmonitored during any period of their life. In those cases where pacemakers were removed after tests for criteria indicating battery depletion, subsequent examination in vitro did confirm their approaching failure. In two cases, transtelephonic recordings showed lack

of capture due to wire or electrode failure, although the variation of pacemaker interval was within normal limits. This capability is an integral part of this system since it permits detection of pacemaker failure for reasons other than battery depletion." (p. 1382)

10. FALSE. "Nine patients with renal failure resulting from diabetic nephropathy were treated by hemodialysis. Average duration of diabetes was 21 years, and mean duration of nephropathy was 26 months. One patient survives after more than three years. Others survived for 9, 20, 19, and 13 months, respectively. Overall mortality was 78% at the end of one year.

"All patients had problems with clotting or infection of bloodstream access routes or both. All had further visual deterioration. Neuropathy was not accelerated. Muscle-wasting, hypoproteinemia, and fluid overload were common. Dialysis for such patients may be considered as a palliative measure with little likelihood of long-term survival or improvement in quality of life." (p. 1386)

*December 18, 1972*

11. Systolic. "In our study, after age stratification, current users of contraceptive drugs had a slight but statistically significant elevation in systolic BP. The diastolic BP rise was less marked. This is in agreement with the findings of Kunin et al. whose study design is similar to our protocol.

"Never users and past users of oral contraceptives had similar BO distributions and were, therefore, combined into a single group of non-users. This suggests that the elevated blood pressure among contraceptive drug users is reversible." (p. 1510)

12. FALSE. "In summary, oral contraceptives are associated with a slight elevation of blood pressure, which appears to be reversible and not apparently related to dose or components of oral contraceptives. Nevertheless, the fact that severe hypertension is probably an unusual occurrence can be reassuring to the great majority of women taking these compounds. Whether or not a minimal elevation of blood pressure is ultimately detrimental to these women is unknown at this time." (p. 1510)

13. More. "Hepatitis B antigen is closely associated with viral hepatitis type B. In addition, transfused blood which contains HBAG will transmit viral hepatitis type B to a large percentage of recipients. The incidence of icteric hepatitis has ranged from zero to more than nine cases per 1,000 units transfused, depending on whether the blood was obtained from volunteers or from professional donors. The total incidence of hepatitis, icteric and anicteric, occurring following the administration of blood is also quite variable and varies from 0 to over 80 cases per 1,000 units of transfused blood. Anicteric hepatitis cases, detected by periodic transaminase determinations, occur two to ten times more frequently than icteric cases, but a



direct correlation is lacking in most series." (p. 1517)

## ARCHIVES OF INTERNAL MEDICINE

December, 1972

14. FALSE. "In this study, as in many others, cholesterol concentration tended to be higher in the younger diabetic patients with atherosclerosis than in diabetic patients without atherosclerosis but these differences were not apparent among the older diabetic patients. From these data, it is apparent that serum triglyceride level provides better discrimination than cholesterol concentration between diabetic patients with and without atherosclerosis." (p. 839)
15. TRUE. "The present study suggests that adiposity is an important factor in the hyperglyceridemia of diabetic patients but not the only one. In each ponderal group mean concentration of serum triglyceride was highest in the diabetic patients with atherosclerosis. In addition, when statistical methods were utilized to adjust for the contribution of obesity to triglyceridemia, the adjusted mean level of serum triglyceride remained higher in diabetic patients with atherosclerosis than in those without atherosclerosis. These data suggest that both hypertriglyceridemia and obesity are independently related to atherosclerosis in diabetic patients." (p. 840)
16. FALSE. "Ahrens and other investigators have shown by the use of acute studies that hypertriglyceridemia may be induced by increasing the intake of dietary carbohydrate and specifically of glucose, sucrose, or fructose. However, this may be a transient phenomenon in normal subjects and in diabetic patients, which disappears after three to six months. In this study, comprehensive dietary evaluations did not reveal significant correlations between triglyceride levels and ingestion of total carbohydrate or that of any specific type of carbohydrate in diabetic patients. From these data it would appear that excessive carbohydrate intake is not a major determinant of hypertriglyceridemia in diabetic patients." (p. 841)
17. FALSE. "The benefits of laparotomy in Hodgkin's disease patients must be balanced against the likelihood of mortality and morbidity due to the procedure. In this series one patient of the 54 died, we feel, as a result of the laparotomy and splenectomy. However, no operative deaths have occurred in over 150 cases reported in the literature, where complications are listed. The period of hospitalization was increased in four patients; morbidity in reported cases has been less than 5%. These risks appear acceptable in view of the additional knowledge of disease status gained and the subsequent influence on therapy management." (p. 847)
18. FALSE. "Seven patients had histologically proved disease in the liver disclosed by biopsies taken at laparotomy. All had systemic symptoms and

six had proved splenic involvement. None of the 35 patients without systemic symptoms had Hodgkin's disease in the liver. Preoperative assessment of liver disease using physical examination, liver function tests, and liver scan was unreliable, and a negative percutaneous liver biopsy did not prove the absence of Hodgkin's disease in the liver." (p. 848)

\* \* \*

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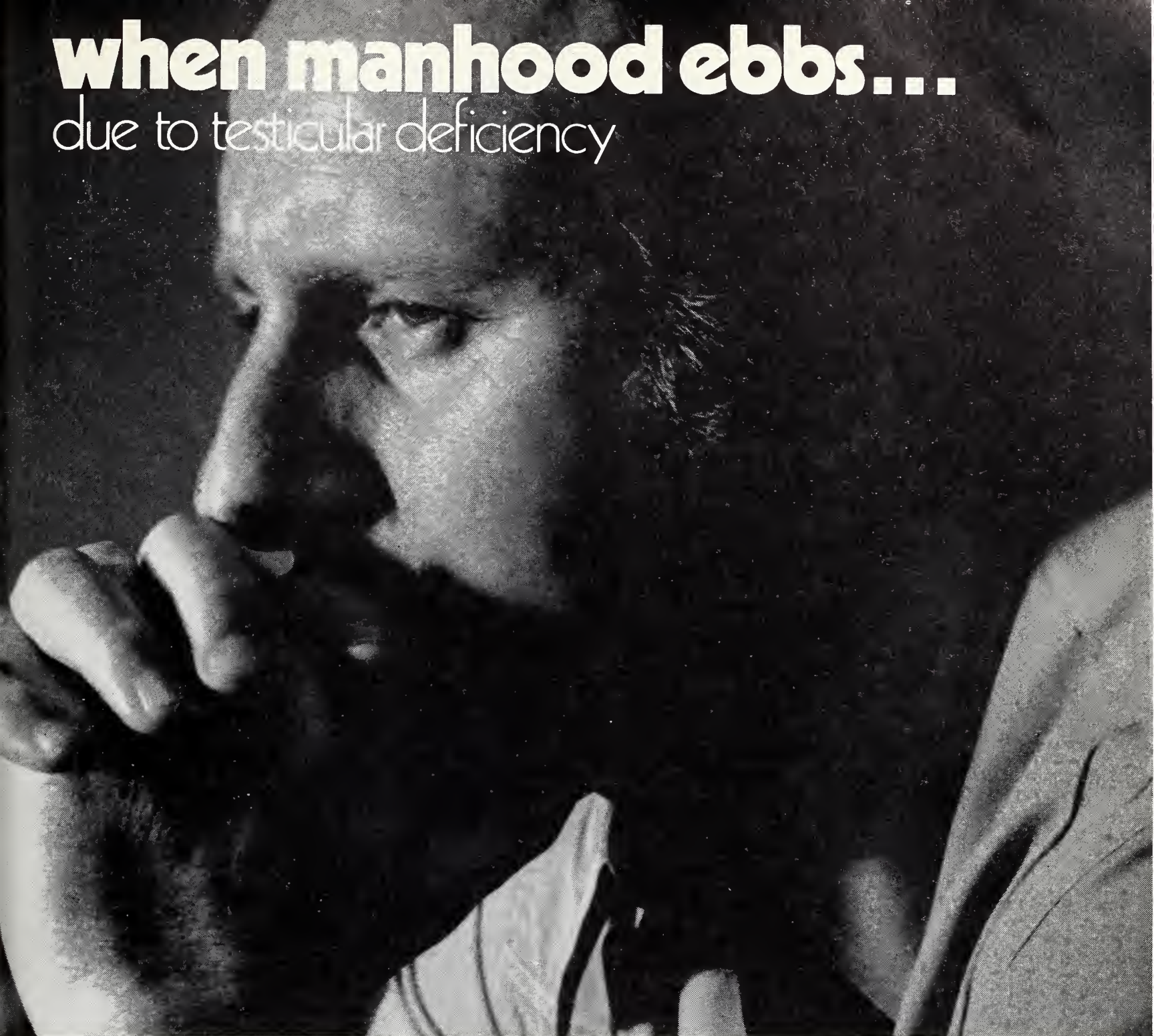
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# when manhood ebbs...

due to testicular deficiency



## Halotestin® 5 mg tablets

fluoxymesterone, Upjohn oral hormone replacement

*"When impotence is the principal complaint of a patient, it is usually the result of an emotional disturbance, in which case androgen therapy is valueless and at times may add to the psychic trauma."\**

**Halotestin® Tablets—2, 5 and 10 mg**  
(fluoxymesterone Tablets, U.S.P., Upjohn)

**Indications in the male:** Primary indication in the male is replacement therapy. Prevents the development of atrophic changes in the accessory male sex organs following castration: 1. Primary eunuchoidism and eunuchism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Those symptoms of panhypopituitarism related to hypogonadism. 4. Impotence due to androgen deficiency. 5. Delayed puberty, provided it has been definitely established as such, and it is not just a familial trait.

**In the female:** 1. Prevention of postpartum breast manifestations of pain and engorgement. 2. Palliation of androgen-responsive

advanced, inoperable female breast cancer in women who are more than 1, but less than 5 years post-menopausal or who have been proven to have a hormone-dependent tumor, as shown by previous beneficial response to castration.

**Contraindications:** Carcinoma of the male breast. Carcinoma, known or suspected, of the prostate. Cardiac, hepatic or renal decompensation. Hypercalcemia. Liver function impairment. Prepubertal males. Pregnancy.

**Warnings:** Hypercalcemia may occur in immobilized patients, and in patients with breast cancer. In patients with cancer this may indicate progression of bony metastasis. If this occurs the drug should be discontinued. Watch female patients closely for signs of virilization. Some effects may not be reversible. Discontinue if cholestatic hepatitis with jaundice appears or liver tests become abnormal.

**Precautions:** Patients with cardiac, renal or hepatic derangement may retain sodium and water thus forming edema. Priapism or excessive sexual stimulation, oligospermia, reduced

ejaculatory volume, hypersensitivity and gynecomastia may occur. When any of these effects appear the androgen should be stopped.

**Adverse Reactions:** Acne. Decreased ejaculatory volume. Gynecomastia. Edema. Hypersensitivity, including skin manifestations and anaphylactoid reactions. Priapism. Hypercalcemia (especially in immobile patients and those with metastatic breast carcinoma). Virilization in females. Cholestatic jaundice.

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## *Hemophilia Home Administration* *A Report on Two Years' Experience*

JAN VAN EYS, M.D., and L. C. LILLY-McKENZIE\*

In 1970 we introduced to the Tennessee medical community the Home Administration Program initiated at the Vanderbilt University Medical Center.<sup>1</sup> The criteria for inclusion of patients were defined in that report. We would like to summarize briefly our experience in the first two years of the program and our extrapolation of the future of the program.

### PATIENT POPULATION

Since the program's inception, a total of 22 patients have been enrolled. Table 1 summarizes their age, diagnosis, mode of administration, i.e., prophylactic or on early demand, person usually responsible for infusion, and success or failure of the participation. Our previous article defined the selection for prophylaxis versus early demand therapy.<sup>1</sup> The aim is the administration of the minimal amount of blood product necessary.

Success or failure is defined on two parameters: medical and performance. A *medical success* is clearly present if the consequences of the bleeding diathesis were at least no more severe than they were under in-hospital supervision. An excellent result can be defined by improvement in the orthopedic and urological consequences of the hemophilia: decrease in chronic synovitis, less frequent hematuria, and fewer non-elective hospitalizations for hemophilia related indications, such as acute abdomen, ischemia of extremities due to closed compartment bleeds, etc. *Performance* is rated by patient acceptance, improved work, school or family performance or attendance, work output and earning capacity. In Table 1 a

number of evaluations had to be rated as good rather than excellent because insufficient longitudinal information prior to home therapy was available to have an objective baseline. For a number of patients longitudinal data are available; these are published elsewhere in detail.<sup>2</sup>

### PRODUCTS USED FOR THERAPY

The multitude of products now available for therapy of hemophilia A and B is an indication both of the magnitude of the problem of hemophilia in this country and of the recognition that adequate therapy results in functional individuals. There remain two criteria for the selection of concentrates: the cost per unit of activity, and the relative risk of hepatitis. The storage requirements differ considerably for the different products, but the availability of the inexpensive home freezer makes any product practical in home use.<sup>3</sup> Cryoprecipitate is our mainstay of therapy because of the relative availability and low cost. Major side effects have not been seen. Only in one case did a patient show urticarial reactions to cryoprecipitate which do not occur with commercial concentrates.

### PATIENT INSTRUCTION

The patients need strict instruction, both in the technical skill of aseptic infusion techniques as well as in the recognition of significant bleeding episodes. There have been no difficulties in mastering the required skills by any patient or his family that genuinely wanted to participate. We designed an instruction booklet that was discussed with the patients so that they learned the quantitative need for each specific bleeding episode. This booklet is avail-

\* From the Department of Pediatrics, Vanderbilt Medical School, Nashville, Tenn. 37232.



TABLE 1.

Patient	Age	Duration of Home Care (mos)	Demand vs. Prophylaxis	Evaluation of Program		Comment
				Patient	Physician	
1	29	18	Demand	E	A	Sibs. No previous follow-up
2	30	18	Demand	E	A	
3	40	23	Demand	E	A	
4	2½	10	Demand	E	E	AHF administered by local physician
5	20	36	Prophylaxis	S	S	Sibs.
6	7½	26	Demand	S	S	
7	5	26	Demand	S	S	
8	41	19	Demand	S	E	No previous following
9	19½	29	Prophylaxis	S	S	
10	25	35	Prophylaxis	S	S	
11	6½	13	Demand	S	S	
12	10	31	Demand	S	E	Downs Syndrome, Congenital heart disease
13	17	36	Prophylaxis	S	E	AHF administered by local physician
14	27	23	Demand	S	E	
15	13½	9	Demand	E	A	Female
16	7½	25	Demand	S	S	
17	6	33	Demand	S	E	AHF administered by local physician
18	28½	20	Demand	S	E	No previous follow-up
19	26	1	Demand	P	P	Withdrew from program
20	25	12	Prophylaxis	S	S	von Willebrand's (severe) Died of complications unrelated to home care

S = Superior  
 E = Excellent  
 A = Adequate  
 P = Poor

able on request.<sup>(a)</sup> Patients remain under supervision by telephone, by direct contact with a designated physician, preferentially in his own locality, and by periodic clinic evaluations. Unless such contact is maintained the patient will be denied renewal of his authorization for clotting factor concentrates.

Footnote (a) Lilly, LC and van Eys, J: Home Therapy for Hemophilia, distributed by the Cumberland Chapter of The National Hemophilia Foundation. Request copies from Dr. R. C. Hartmann, Vanderbilt University School of Medicine, Division of Hematology, Nashville, Tenn. 37232.

## COMPLICATIONS

The impact of the great freedom of dependency in medical centers is greater than one might at first estimate. Direct medical complications have not been encountered. No sepsis, hepatitis transmission, or inadequate therapy for severe hemorrhage were encountered when adequate instruction was given.

Psychological complications of home care must be considered. Though there are few data regarding this subject, a recent study warns that promotion of independence from a hospital and medical personnel cannot be equated with



the promotion of appropriate independence within the family.<sup>4</sup> One patient, referred to in our previous report,<sup>1</sup> passively resisted home therapy. Since that occurrence extreme caution was taken to avoid any coercion from the physician to participation by prospective patients. It is our feeling that this mode of screening has avoided any untoward psychological consequences.

### PHYSICIAN'S ACCEPTANCE

The initial fear of many physicians that home administration would remove the management of a disease with potential lethal consequences into the hands of patients with an uncertain and unproven attitude toward therapy has proven groundless. Rather the opposite: our experience has been that the physicians again become physicians instead of bored IV technicians. Better attention was given to the patient during evaluations at intervals than is given during frequent routine drop-ins for therapy. This is especially true for the follow-up for urinary tract complications. In addition, peripelvic new bone formation came to our attention because of our improved follow-up.<sup>5</sup> This has not been reported in the American literature although it was known in Europe.

### ECONOMIC IMPACT

The cost remains the only severe complication of hemophilia home care. While home care is less expensive on paper, it may be more expensive to the patient, since it often is not covered by third party payments, whereas hospital based care is.<sup>2</sup> This serious drawback is now being alleviated through the categorical appropriation for hemophilia care in many states. Such an act is in effect in the State of Tennessee, thus removing the only remaining barrier toward effective home care.

### EXPERIENCE IN OTHER CENTERS

A number of other centers are encouraging home care, though the number of published reports with solid data are few. However, all centers report excellent medical results. Some of the earlier reports have been referred to.<sup>1</sup> More recently strongly encouraging reports have appeared which show that utilization of medical facilities and complications of hemophilia are measurably diminished.<sup>2,6,7,8</sup> School attendance has markedly improved for younger patients and absenteeism decreased.<sup>6,7,9</sup> Utilization of clotting factors either is little changed<sup>2,8</sup>

or there is a very moderate increase in usage.<sup>7,10</sup>

An alternate method of home therapy has also been successful: visiting nurse clotting factor administration has been recently evaluated in Canada.<sup>11</sup> There appears, however, to be no advantage of that method over self administration.

The National Hemophilia Foundation has prepared a pamphlet with guidelines for the initiation of a home therapy program at appropriate centers. This will soon be available.

### SUMMARY

Two years' experience with home care for hemophilia at the Vanderbilt University School of Medicine is briefly reviewed. The program has been eminently successful, and deserves continuation.

### ACKNOWLEDGEMENT

The Cumberland Chapter of the National Hemophilia Foundation has generously supported the cost of the patient evaluations, the family teaching sessions and the preparation and distribution of the home therapy manual.

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# Current Concepts of Cesarean Section In a Large Private Hospital

BRADFORD W. KINCHELOE, M.D., MICHAEL R. MARSHALL, M.D. and  
PHIL C. SCHREIER, M.D., FACOG\*

It has become evident in recent years that the role of cesarean section in modern obstetrical practice has increased considerably. Cesarean section has been encouraged in a more aggressive approach to the treatment of fetal distress (Van Praagh and Tovell, 1968), to the achievement of safe delivery in breech presentations (Lanka and Nelson, 1969), to the management of face and brow presentations (Voigt, 1967), as well as for the more standard indications, such as cephalopelvic disproportion, placenta previa, abruptio placentae, and prolapse of the umbilical cord.

It is our purpose in this presentation to study the current indications for cesarean section, the morbidity and mortality rate, and the influence of ancillary procedures such as appendectomy or tubal ligation on the mortality and morbidity. In pursuing this purpose, all cesarean sections done in the calendar year 1972 were reviewed. All sections reviewed were performed by board eligible or certified obstetricians-gynecologists or by residents at the second or third year level, under the direct supervision of the former. The patient population consisted of approximately 90% private patients and 10% service patients. Sections were performed under general anesthesia,  $C_3H_6$ ,  $N_2O$ , or a combination thereof with sodium pentothal induction; a few were performed under spinal anesthesia. Though cesarean sections of all types were done, the majority were of the low cervical transverse type. Approximately 20% were accompanied by either tubal ligation or appendectomy, or both.

A total of 374 cesarean sections were done in the course of 4,166 deliveries, a rate for 1972 of 9.0%. A review of section rates for the past ten years reveals a steady rise. This trend has particularly accelerated in the past four years. (Graph 1)

The indications for cesarean section with

\* From the Department of Obstetrics and Gynecology, Baptist Memorial Hospital, Memphis, Tenn.

GRAPH ONE

CESAREAN SECTION RATE 1962-1972  
IN PERCENTAGE OF TOTAL DELIVERIES



TABLE ONE

CESAREAN SECTION INDICATIONS

	Total Number	Percentage
Repeat Section	120	32 %
CPD	101	27 %
Ruptured BOW without Progress	40	10.5%
Fetal Distress	36	9.5%
Fetopelvic Disproportion	30	8 %
Placenta Previa	13	3 %
Abruptio Placenta	8	2.1%
Prolapsed Cord	5	1.2%
Diabetes Mellitus (primary)	2	0.8%
Rh Incompatability	2	0.8%
Prior Myomectomy	2	0.8%
Placental Insufficiency	1	0.2%
Ruptured Uterus	1	0.2%
Miscellaneous	3	0.9%
	374	

the number and percentage of each are shown in Table 1.

*Repeat Cesarean Section*—The relative percentage of this group has remained essentially the same. The management of repeat sections in our institution is based on delivery at approximately 37 to 39 weeks as judged by menstrual history, date of quickening, clinical evaluation of condition of the cervix, estimated fetal weight, and fetal maturity studies, where indicated.



Some patients are still allowed to go into spontaneous labor if the aforementioned information is uncertain.

*Cephalopelvic Disproportion*—Over the last few years, this indication has been cited more frequently, a factor explained by the declining use of mid-forceps delivery. A diagnosis of CPD is made in our institution in the face of nonprogressive labor over a reasonable length of time, usually with oxytocic augmentation. Little use is made by our staff of x-ray pelvimetry if there is little or no clinical evidence of pelvic contracture. Even if there is evidence of a clinically borderline pelvis and x-ray pelvimetry is obtained, a trial labor is utilized before cesarean section is accomplished.

*Ruptured Membranes without Progress*—Patients with premature rupture of membranes are handled in such fashion that delivery is accomplished by approximately twenty-four hours. An adequate trial of labor with pitocin induction or augmentation precedes cesarean section in nearly all cases. Again, difficult forceps deliveries have been abandoned in favor of cesarean section in these cases, perhaps explaining the more frequent use of operative delivery in this category.

*Fetal Distress*—There is no question that there is an increased use of cesarean section in this obstetrical problem. Since the availability of continuous fetal heart monitoring, the diagnosis of fetal distress had become more frequent in the labor suite. Our delivery suite uses constant fetal monitoring for all labor patients, which is closely followed by our labor room nurses. They are trained to be especially attentive to the fetal heart tones of patients with meconium staining. In our institution, most patients who underwent cesarean section for fetal distress had meconium stained fluid and fetal bradycardia between uterine contractions. This confirms the findings of Fenton and Steer (1962) that most cases of significant fetal distress occur when both of these signs are present.

*Fetopelvic Disproportion*—This category illustrates more liberal use of cesarean section in management of breech presentation. This is especially true in the primipara breech. In our institution, breech presentations are usually allowed to labor as long as progress is made, as judged by their cervical dilatation and descent of the presenting part (especially if frank

breech). At the first sign of failure of progression, cesarean section is usually done. An even more liberal attitude prevails in footling breech presentation because of the increased risk of cord prolapse,<sup>2</sup> (Lanka, 1967).

*Placenta Previa, Abruptio Placentae, and Prolapse of the Umbilical Cord*—The incidence of these indications remains about the same for obvious reasons.

*Diabetes Mellitus*—In our hospital, pregnancy in diabetics is usually terminated at 35 to 37 weeks gestation, based on the menstrual history, date of quickening, clinical evaluation of the cervix, estimated fetal weight, as well as the severity of the maternal disease. Most diabetics received a trial of labor and if no response or progression of labor with oxytocin stimulation is shown, a cesarean section is done without hesitation. Serial inductions are less frequently used in our institution than in preceding years.

The remainder of the indications for cesarean section were used so infrequently that they will not be individually discussed.

*Morbidity and Mortality*

In order to place the overall effects of the liberalization of cesarean section in perspective, we reviewed 300 consecutive cesarean sections done in 1972 for mortality and morbidity. The overall data from this review are presented in Table 2. There was no maternal mortality re-

TABLE TWO  
MORBIDITY—CESAREAN SECTIONS—1972  
Based on chart review of 300 consecutive operations

	Febrile Course 100.4° after 1st postoperative day	Antibiotics— given non- prophylactically	Antibiotics— Prophylactic	Blood Replacement	Reoperation or Readmission
Total Number	116	139	12	34	7
% of all cases	38.8%	46.3%	4%	11.3%	2.3%

lated to cesarean section. In our assessment for morbidity, we used the following parameters: 1) febrile course of > 100.4° after the first postoperative day, 2) patient requiring (or given) antibiotics, 3) patient requiring blood transfusions, 4) patient requiring reoperation or readmission, and 5) the number of post-operative days.



In our series of patients, 116, or 38.8%, had a febrile course as described under the condition above. The most common causes were atelectasis, urinary tract infection, and endometritis. Other causes were attributed to wound infection, pneumonitis, and thrombophlebitis. Furthermore, we noted that the vast majority of those patients who exhibited febrile morbidity had only a transient course, which either subsided spontaneously, or which rapidly responded to antibiotic therapy.

Of the 300 cases reviewed, 152 received antibiotics. Of this number, 12 were given purely prophylactic antibiotic therapy, and of these, none exhibited febrile morbidity. The remaining 139, or 46.3%, were given antibiotics in response to elevated temperature, persistent dysuria both with and without positive urine cultures, persistent cough with pulmonary congestion, and both central (wound) and peripheral cellulitis. In the majority of the cases, the antibiotic chosen was penicillin, although the cephalosporins, and kanamycin were not infrequently used, and even gentamycin and carbenicillin were occasionally used. Several patients required at least one change of antibiotics. There was no reported case of drug toxicity in those cases reviewed.

The third parameter was that of the need for blood replacement. Of the total cases, 11.3% of the patients received between 1 and 14 units of blood. This may seem a relatively small percentage of cases but it must be remembered that our patient population consists largely of private patients with good nutrition and adequate prenatal care. In general, the estimated blood loss for our patients correlates well with other published reports (Toldy and Scott, 1969). One patient developed clinical jaundice three weeks after having received blood replacement; the etiology of her jaundice was never fully documented, but at least one consultant felt it was of an obstructive nature. No cases of serum hepatitis were found in this series.

Seven or 2.3% of our patients required reoperation or readmission for a disorder related to the cesarean section. Of these, three patients developed partial wound dehiscence, two of which responded to local care and antibiotics and one of which required blood replacement, antibiotics and secondary closure. Two patients developed prolonged ileus, either as a separate entity or in combination with other postoperative

complications. One patient was readmitted with a wound infection but later developed postpartum hemorrhage with pelvic sepsis, ultimately requiring total abdominal hysterectomy. Four patients were readmitted with persistent or recurrent vaginal bleeding, all of which responded to blood replacement, oxytocics and curettage.

The hospital stay for the immediate postoperative period ranged from two to nineteen days, with an average of 5.65 days.

Our third purpose was to evaluate separately the morbidity of patients undergoing cesarean section who had additional procedures done concurrently, such as tubal ligation or appendectomy, or both. A few patients has such ancillary procedures as liver biopsy, myomectomy, or ovarian resection or biopsy. Of the 300 cases reviewed, 15% had ancillary procedures done. The total number and percentage of each group is shown in Table 4.

TABLE THREE  
MORBIDITY—CESAREAN SECTION WITH  
AUXILIARY PROCEDURES  
(Not including Cesarean Hysterectomy)

Total Cases—58				
Total Number	Febrile Course 100.4° on second postoperative day or later	Antibiotics Given	Blood Replacement	Reoperation or Readmission
	13	21	4	0
% of all cases	22.4%	36.2%	6.9%	0%

TABLE FOUR  
ANCILLARY PROCEDURES ASSOCIATED  
WITH CESAREAN SECTION

	Appendectomy	Bilateral Tubal Ligation	Both
Total Number	5	36	16
% of all cases	9%	63%	28%

63% had tubal ligation only, 9% had appendectomy, and 28% had both procedures. Other ancillary procedures included repair of umbilical hernia and tubal ligation; myomectomy and appendectomy; and a third had a liver biopsy, appendectomy and tubal ligation.

The results for the morbidity in the patients were calculated separately. 22.4% of the patients had a febrile course of 100.4° or greater



after the first postoperative day and antibiotics were given in 36.2%. Morbidity in this group, when compared with the total group, was somewhat less. We believe this is probably best explained by the fact that most of these sections were done on an elective basis as repeat sections, and therefore, many of these patients were not subjected to the risk factors present in emergency operations (Morrison, 1973). The important fact is that the ancillary procedures did not significantly increase the morbidity. This agrees with written reports in the literature concerning cesarean section and ancillary procedures, especially appendectomy. Sweeney (1959), Champion and Doolittle (1961), and Schreier and Myers (1960), all report on appendectomy associated with cesarean section. In each of these series, as with ours, there was not increased morbidity, and all authors felt appendectomy should be accomplished at the time of cesarean section.

In summary, we have concluded that the liberalization of indications for cesarean section is largely in three categories: 1) fetal distress with new instruments available for diagnosis, 2) breech presentation with section considered the best route of delivery at the earliest sign of nonprogression of labor, and 3) cephalopelvic disproportion with abandon-

ment of difficult mid-forceps rotation or delivery.

Our findings with respect to morbidity are subject to interpretation but seem to be about the same as those presented in the literature. We do not believe ancillary procedures in uncomplicated cases add to the morbidity, and should be done without hesitation if indicated.

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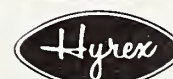
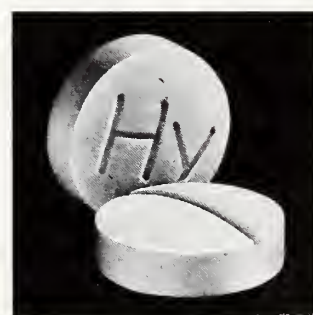
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# Proficiency Testing in the Physician's Office Laboratory:

## *An Ounce of Prevention* \*

RAYMOND F. HAIN, M.D.,† Oklahoma City, Okla.

I appreciate this opportunity to bring you a message, the implications of which may have a considerable impact on your office practice. I speak as a friendly sympathetic colleague and plead with you to interpret my remarks in that context.

It has been alleged to the Congress of these United States that the poorest of all laboratory work is that done in the private physician's office.<sup>1</sup> If for no other reason than convenience, physicians are going to continue to do laboratory work in their own offices. However, the impact of such testimony means that standards now applied to independent and hospital laboratories will eventually be applied to the physician's office laboratory. Judging from the comments at a National Proficiency Testing Conference, October 4-6, 1971 at the National Center for Disease Control in Atlanta, Georgia, that eventuality may be much closer than we think. Two states, California and Arizona, have already passed legislation requiring physicians' office laboratories to participate in proficiency testing beginning January 1, 1972. For me, a pathologist, to argue that physicians should not do laboratory work in their own office is the epitome of naivete. For you, a private physician, to argue that you do not need standards for laboratory work done in your own office is an unwitting disservice to the patients you serve. We would both have our heads buried in the sands of unreality; an awkward and dangerous posture. Instead, my posture should be, "What can I do to help you assure that you are doing reliable laboratory work?" Your posture should be, "What do I need to do to be certain that the laboratory information generated in my

office is medically useful?" Some of you may choose to disregard the implications of these statements, others may challenge their validity. Before you do so, however, let us look at some facts.

In 1968 the Oklahoma State Medical Association (OSMA) created a Laboratory Quality Committee to address itself to the physician's office laboratory. The committee's first step was to invite physicians doing office laboratory work to participate in a voluntary proficiency testing program made available by the College of American Pathologists. The purpose of this program was twofold. One, to ascertain the magnitude of the alleged problem, and two and more importantly, to use the information obtained to plan educational programs to correct deficiencies that might become apparent.

In 1969, twenty-four physicians' office laboratories participated in this program; in 1970, eighty-one participated. A summary of the results are shown in Table 1.

Let me clarify the distinction between technically unacceptable results and medically misleading results. For example, if a urea nitrogen proficiency test sample has a mean value of 16 mg% with a standard deviation of 1.0 mg%, the technically acceptable range would be 14 to 18 mg%. If a participant reported a value of 13 mg%, this would be technically unacceptable. It would not, however, be medically misleading. If, on the other hand, the reported value was 35 mg%, this would not only be technically unacceptable, but it would also be medically misleading as it would mislead the physician in the care and treatment of his patient. The limits for medically misleading values were established by the clinicians on the OSMA Laboratory Quality Committee.

These overall results are surprisingly good. Especially when viewed in the context of the allegations and of published reports citing the performance of laboratories other than in the physician's office. For example, a survey of

\*Read before the Section on Pediatrics, Southern Medical Association, Sixty-fifth Annual Meeting, Miami Beach, Fla., Nov. 1-4, 1971.

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TABLE 1  
SUMMARY OF 1969 AND 1970 OSMA  
PHYSICIAN'S OFFICE LABORATORY  
PROFICIENCY TEST RESULTS

Year	No. of Participants	No. Reported Values	Technically	Medically
			Unacceptable (%)	Misleading (%)
1969*	24	1176	12.7	5.7
1970†	70	3786	10.0	5.8
1970*	10	517	10.0	7.0
1970‡	1	92	21.0	18.0

\*College of American Pathologists Basic Survey Series.

†College of American Pathologists PEP Series.

‡College of American Pathologists Comprehensive Chemistry Series.

6,000 tests done in 170 Canadian laboratories revealed 47% of the reported results were outside the limits of acceptable error and 22% of these were 5 times greater than the allowable limits of error.<sup>2</sup> A survey of hemoglobin determination in 398 laboratories throughout the United States revealed 33% were technically unacceptable.<sup>3</sup> Closer to home let us look at the results of surveys of a group of Oklahoma rural hospitals conducted in 1966 and 1969 (Table 2). The figures, I believe, speak for themselves. Compared to 1966 the 1969 performance is a most dramatic improvement and

TABLE 2  
PROFICIENCY TEST PERFORMANCE OF  
SMALL RURAL HOSPITALS IN OKLAHOMA

Test Material	1966			1969		
	No. Values Reported*	Technically Unacceptable	Medically Misleading	No. Values Reported**	Technically Unacceptable	Medically Misleading
		(%)	(%)		(%)	(%)
Hemoglobin	48	59	25	326	5	0.3
Urea nitrogen	44	57	25	318	4	0.7
Glucose	47	13	2	328	6	1
Uric acid	43	12	5	270	5	2
Calcium	25	36	24	150	7	2
Bilirubin	37	19	11	276	6	0.7
Cholesterol	47	11	11	280	8	2
Bacteriology†	75	57	57	77	24	18

\*Each value represents a different hospital.

\*\*Composite of 3 check samples each with 2 concentrations.

†Two check samples—each a different organism.

TABLE 3  
SELECTED CONSTITUENT RESULTS OF  
OSMA PARTICIPANTS

Constituent	Technically Unacceptable		Medically Misleading	
	1969 (%)	1970 (%)	1969 (%)	1970 (%)
Glucose	21	17	6.7	9.8
Bilirubin	24	9	1.6	3.3
Cholesterol	17	4	1.8	2.1
Urea nitrogen	18	19	3.2	8.2
Uric acid	23	16	10.5	10.6
Hemoglobin	18	8	2.2	2.1

I am happy to report that a review of results in a June, 1971 proficiency testing survey shows essentially the same high level of performance. This improvement in performance did not "just happen," nor is it the result of proficiency testing alone. It is the result of a supervised daily quality control program and a continuous educational program in which proficiency testing is used to monitor their effectiveness and to identify specific additional educational needs. While the overall results from the physicians' office laboratories are better than experts predicted, there are some thorns among the roses. The performance of OSMA participants for selected procedures in the survey is shown in Table 3. I think you will agree there is room for improvement.

Ideally we should strive for no medically misleading values. Human that we are probably precludes this. Therefore, we need to reach the irreducible minimums which in all probability can be at the one percent level or less. Note the discrepancy between the percent of technically unacceptable and medically misleading values in 1969 and 1970. If you look at the differences in the percent of technically unacceptable results, it would appear the 1970 performance is better. If, on the other hand, you look at the percent of medically misleading values, the 1970 performance is poorer. This apparent paradox is due to the fact that the limits for technical acceptability were wider in 1970 than in 1969 because of the difference in the composition of the peer groups whose performance was used to establish these limits, whereas, the medically misleading limits set by the clinicians were essentially the same in both years.

When one analyzes the survey data on the basis of performance of the individual physician's office laboratory, the rosebush is even thornier (Table 4). Seventy-nine percent of



TABLE 4

INCIDENCE OF MEDICALLY MISLEADING  
VALUES REPORTED BY INDIVIDUAL OSMA  
PARTICIPANTS IN 1970 PROFICIENCY  
TESTING PROGRAM

Medically Misleading Values (%)	Percent of Participants
0	21
1- 5	36
6-10	20
11-15	6
16-20	11
over 20	6

the participants reported one or more medically misleading values and 23% reported more than 10% medically misleading values with the poorest being 30%. It is of interest that of the 16 physicians' office laboratories reporting more than 10% medically misleading values, 10 were using the Bio-Dynamics Uni-meter Instrument and 5 a precalibrated Leitz Colorimeter which had not been recalibrated since the day it was purchased. This does not necessarily mean that the instruments were at fault. It does mean, however, that under the circumstances in which they were used they did not produce reliable laboratory information.

This prompts me to emphasize that proficiency testing is a valuable tool to alert you to problems in your laboratory, but it does not correct them. Nor should it be used as a substitute for a total quality control program. The latter must be a daily surveillance program with proficiency testing used to periodically monitor

TABLE 5

SUMMARY OF 1969 AND 1970 OSMA  
PHYSICIAN'S OFFICE LABORATORY  
PROFICIENCY TEST RESULTS

Year	No. of Participants	No. Reported Values	Technically Unacceptable (%)	Medically Misleading (%)
1969*	24	1176	12.7	5.7
1970**	70	3786	10.0	5.8
1970*	10	517	10.0	7.0
1970**	10†	678	3.0	1.3

\*College of American Pathologists Basic Survey Series.

\*\*College of American Pathologists PEP Series.

†Participating in a Supervised Quality Control Program.

TABLE 6

PROFICIENCY TEST RESULTS\* OF 21 OSMA  
PHYSICIANS' OFFICE LABORATORIES ON  
SUPERVISED QUALITY CONTROL PROGRAM

Constituent	No. Values	Technically Unacceptable (%)	Medically Misleading (%)
Glucose	42	7	0
Bilirubin	22	9	0
Cholesterol	40	5	0
Urea nitrogen	34	6	6
Uric acid	28	0	0
Hemoglobin	42	17	0
Total	208	8	<1

\*June 1971 College of American Pathologists PEP Survey.

its effectiveness. That a supervised daily quality control program does have a favorable impact on performance was seen in the improvement in performance of the small hospitals. Table 5 illustrates its impact on performance in the physician's office laboratory. Note the performance of the 10 physicians' office laboratories on the last line.

Even more impressive is an analysis of the June, 1971 proficiency test results of 21 physicians' office laboratories participating in this same supervised quality control program (Table 6). Of 208 reported values, only 2, less than one percent, were medically misleading. Furthermore, both of the medically misleading values were reported by the same laboratory, thus 20 of 21 participants, or 95%, reported no medically misleading values.

I think you will agree that there is some merit in taking a closer look at the reliability of laboratory information generated in your office. Voluntary participation in a proficiency testing program is a good start. I urge those of you not already doing so to participate in the College of American Pathologists Physicians Office Laboratory Evaluation Programs. It could be the ounce of prevention that prevents the mandatory pound of cure. The decision is yours.

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## Systemic Blastomycosis Involving Genitourinary Tract and Skin

**Present Illness:** This was the first admission of a 55-year-old black male farmer who was well until five weeks prior to admission, when he developed furuncles on his wrists, back and scalp. He went to his physician, who treated him with Chloromycetin and Ganatol. The infection cleared, leaving only residual small, raised areas of his scalp, wrists and back. About two and one-half weeks later he developed painless swelling of the right side of his scrotum. The scrotum became progressively larger, and he again visited his physician, who referred him to this hospital. He had no other complaints referable to his genitourinary system. There had been no recent loss of weight, and there was no history of any serious illness in the past.

**Physical Examination:** Temperature 100.6°, pulse 88, blood pressure 120/78. He appeared well developed and well nourished, and in no acute distress. The pupils were round, equal and regular, and reacted to light and accommodation. There was no discharge from the ears, nose or throat. The chest was clear to percussion and auscultation. The heart was not enlarged. There was a regular sinus rhythm and no thrills or murmurs were heard. The abdomen was soft, and no organs or masses were felt. The right scrotum was enlarged to about two and one-half times its normal size. It was not tender, and there was no local heat or redness. There were multiple small, raised nodules on the face, scalp and neck. The neurological examination was within normal limits.

**Laboratory Data:** The white blood count was 9,100 with 72% neutrophils, 21 lymphocytes and 7 monocytes. The hematocrit was 33, and the hemoglobin 10.8. The urine was cloudy with a reaction of 5.5, and a specific gravity of 1.024; albumin and sugar were negative; there were 80 to 90 WBC on microscopic examination. The STS was negative. The urea nitrogen was 17 mg%. Total protein was 6.9 Gm.% with an albumin of 3.4 and a globulin of 3.5 Gm.% SGOT 7 units. Alkaline phosphatase 10.2 KA units; acid phosphatase 0.21 Bodansky units. A routine urine culture was sterile. A Gravindex test was negative.

**X-Ray:** An x-ray of the chest revealed the heart not to be enlarged. The lungs were clear. There was blunting of the left costophrenic angle and there was a linear streak of the left lung field which might represent an anomaly or soft tissue. Scrotum—there was no evidence of calcification within the soft tissues of the scrotum.

**Hospital Course:** On admission, the patient's temperature

was 100.6°. He was placed on Ampicillin and Chloromycetin; however, he did not respond to this therapy, and his temperature remained elevated, reaching peaks of 102.6° on several different occasions. On his eighth hospital day, an operation was performed.

## CLINICAL DISCUSSION

**DR. JOHN C. LARKIN:** With the skin lesions, one might think of fungus infections, and the two most likely would be blastomycosis and sporotrichosis. Blastomycosis not infrequently is associated with genitourinary tract infections, and, of course, usually shows pulmonary involvement. At times, the only manifestation one may see is the skin involvement. It is thought that blastomycosis almost always begins as a pulmonary lesion and is then disseminated to the skin and other organs, particularly to the genitourinary tract and bone. Such dissemination is also rather common in tuberculosis when organs other than the lung are involved. While the pulmonary lesion may be the point of entry for such diseases, the pulmonary focus itself may disappear, and the disseminated infection may give the clinical picture. In our case today, the pulmonary lesions are not apparent. From the protocol, it is obvious that this man did have a urinary tract infection, with fairly numerous white blood cells in the urine. The routine culture of the urine was sterile, but this, of course, does not rule out such pathogens as those causing blastomycosis and tuberculosis, which would not be picked up on the basis of routine culture. The fact that the routine culture is sterile is even more of an argument for such a diagnosis as tuberculosis or blastomycosis.

Another possibility one should consider is sporotrichosis. In this disease, skin lesions are often limited to a certain area of the body and may appear as nodules or abscesses, and frequently one finds the local lymph nodes severely involved in such cases. Sometimes there are multiple secondary lesions in between the primary lesion and lymph node involvement. In our case today, it would, in all probability, have been extremely important to biopsy one of the skin lesions. Certainly, the fungi could have been identified in such sections, and this would include the fungus organisms causing sporotrichosis. Although sporotrichosis can be a generalized infection, the more common form is local involvement. These patients with localized sporotrichosis often give a history of contact with plant material.

From the Medical and Laboratory Services, VA Hospital, Memphis, Tenn. 38104.



An additional possibility is, no doubt, the one considered by the surgeons in this case; that is, a testicular tumor, since there was an enlargement of the testicle, which was relatively painless. An x-ray of the scrotum did not show any calcification or bone formation. Such an x-ray with a testicular mass is an important examination since it may disclose evidence of old hemorrhage with calcification and even bone formation occurring in the organized tissue. Likewise, calcification can occur in infections and rarely in testicular tumors. The pregnancy test was negative. This is an important examination in cases where testicular tumor is suspected. Up to 15 per cent of testicular tumors classified as seminomas may show a positive pregnancy test, which simply means that some part of the tumor is capable of producing hormones. In the other forms of testicular tumor, positive pregnancy tests are even more common.

In this case, we are left with a differential diagnosis of an infection such as tuberculosis or blastomycosis, and a tumor. From the information available in this protocol, I believe that this is more likely an inflammatory lesion, and that the skin lesions are those of a fungus infection. The most common of the fungus infections which have a generalized dissemination and skin lesions would be blastomycosis; therefore, my impression in this case is blastomycosis of a systemic type with particular involvement of the skin and genitourinary system.

#### ANATOMIC FINDINGS

DR. J. M. YOUNG: The fact that this patient's skin lesions improved under treatment was a little misleading for everyone who saw the case. Since many of them disappeared and others became much smaller, little attention was paid to them when he did not respond to the treatment for epididymoöorchitis. Since the possibility of testicular tumor was present, the testicle was removed. As Dr. Larkin has surmised, the eventual diagnosis was blastomycosis. Organisms were recovered from the skin lesions, as well as from the testicular lesion. In reported series of blastomycosis cases, up to 20 per cent have involved the genitourinary tract. Prostatic involvement is quite common. When the testicle was sectioned, there was principal involvement of the epididymis with actual abscess formation. There had been an extension of this process into the testicular tissue, and the overall appearance was quite character-

istic of granulomatous infection in the testicle and associated structures.

#### FINAL ANATOMICAL DIAGNOSIS

1. Systemic blastomycosis with involvement of testicle and skin.

DR. W. D. SUTLIFF: Following the diagnosis in this patient, we treated him with hydroxystilbamadine, but during this period he also developed a slight headache and confusion. A tap showed 400 white cells and he was running some temperature. Since his confusion became worse and the number of white cells in his spinal fluid increased to more than 800, we felt it was obvious that he was showing signs of central nervous system involvement by blastomycosis. Since, in our experience, hydroxystilbamadine has been inadequate therapy for such a case, he was changed to Amphotericin B immediately. Within 48 hours, his temperature became normal and he began to improve. The number of white blood cells in his spinal fluid gradually decreased, and at four months no cells were present at all. The cultures from the central nervous system, however, of the spinal fluid did not show blastomyces organisms. The patient has been followed since this time and has not



FIG. 1 Testis and epididymis showing abscess with spread into testis.

*continued on page 1146*



## Malignant Hypertension

Malignant hypertension is a life-threatening form of severely elevated blood pressure. It is unique in the spectrum of hypertension in that it is a generalized process affecting virtually every organ system in the body. Clinical observations during the first half of this century emphasized this fact and clearly segregated this entity from the more common "benign" variety of hypertension.

Pathologically, it is clear why malignant hypertension is a systemic process. Throughout the body, the arterioles show varying amounts of inflammation and frank necrosis along with cellular intimal proliferation. These destructive arteriolar changes have a special proclivity for the kidney and are nowhere else as severe. From these observations a more appropriate designation for this syndrome might be a "progressive hypertensive arteriolopathy," a point especially borne out in reviewing the experience of those who followed the "natural history" of the disease before pharmacologic agents were available for treatment. Several investigations revealed similar prognostic information: untreated, the mean life expectancy after the onset of malignant hypertension is 8 months.

The diagnosis of malignant hypertension should be made when severe hypertension (diastolic pressure almost always over 120 mm Hg.) is associated with any of the manifestations of progressive hypertensive arteriolopathy. The most typical sign of malignant hypertension is papilledema, which in most cases is bilateral, but in a number of cases it has been unilateral. It is important to note that the changes seen in the optic discs are probably due to an optic papillitis, and not to elevated cerebrospinal fluid pressure. Some patients do indeed have elevated CSF pressures, but a large number do not.

Although papilledema is a frequent sign, severe arteriolopathy may exist without it. Other manifestations of the arteriolopathy are hemorrhages and exudates in the optic fundi, rapid loss of renal function without identifiable causes other than severe hypertension, enceph-

alopathy, and microangiopathic hemolytic anemia.

Microangiopathic hemolytic anemia is an important marker of the arteriolopathy seen on the peripheral blood smear. It is hypothesized that in the presence of arteriolnecrosis, platelet aggregation occurs after exposure to collagen in the arterial wall, leading to fibrin deposition. When red blood cells pass through the already narrowed vessel, they are fragmented by the strands of fibrin. As a consequence, the peripheral smear shows bizarre red cells such as burr cells and helmet cells. In addition, there is a depressed platelet count and a reticulocytosis. These hematologic abnormalities are sensitive to changes in the underlying pathologic state and therefore should be followed closely as an index to the success of therapy.

On presentation, evidence of long-standing blood pressure elevation as reflected by the EKG and chest X-ray are not invariably present. Renal function is frequently normal or mildly decreased although patients have been seen to present with severely impaired renal function ( $\text{BUN} > 60$ ).

Virtually every correctable form of hypertension has been associated with malignant hypertension. In the past two years, 25% of patients presenting with malignant hypertension at Vanderbilt have been found to have renal artery stenosis. Arteriographic evaluation is usually deferred in these patients until the blood pressure has been well controlled for 2 weeks. Accordingly, renal arteriography is mandatory in patients with malignant hypertension.

Therapeutically, malignant hypertension is a medical emergency. The initial therapy will depend on the patient's coexistent illnesses. Specifically, the presence of ischemic heart disease is a relative contraindication to initial therapy with hydralazine or diazoxide because of the reflex tachycardia and the possibility of inducing increased myocardial ischemia. In this situation, increasing doses of pentolinium with diazoxide administration following the ganglionic blockade would be useful. Sodium nitroprusside, a vasodilator which does not produce reflex

*continued on page 1146*



## Serum Protein Electrophoresis

Research investigation of the serum proteins, using a great number of new tools and techniques, has yielded a tremendous amount of information applicable to clinical medicine, particularly in the areas of immunopathology and clinical immunology. Electrophoresis of serum proteins, which for a while seemed to fall into disfavor, has convincingly re-established itself as one of the simplest and most basic but yet most helpful methods of initial value in interpretation of serum protein changes. Although few truly diagnostic patterns may be seen on serum protein electrophoresis, pattern interpretation plus the use of other laboratory techniques (urine and spinal fluid electrophoresis, immunoelectrophoresis, immunoquantitation, etc.) yield a great quantity of useful clinical information.

While most clinical reports consist of the densitometric scan of the electrophoretic pattern, many workers feel strongly that the greatest amount of useful information results from visual evaluation of the individual bands themselves, particularly when using high-resolution gels for protein separation. It cannot be too strongly emphasized, however, that optimal interpretation of this test requires an adequate amount of clinical information from the requesting physician.

Changes in specific protein components should be evaluated. Hypoalbuminemia generally reflects protein loss, decreased hepatic synthesis, or hemodilution, and is quite non-specific. Hyperalbuminemia virtually always indicates dehydration, either *in vivo* or as an *in vitro* artifact. Decreases in  $\alpha_1$ -globulins are seen in old sera, and pathologically, but rarely, in  $\alpha_1$ -antitrypsin deficiency. Decreased  $\alpha_2$  globulins are rarely encountered. Increases in these globulin fractions are commonly seen in acute reactions to tissue injury of various sorts (infections, infarction, neoplasia, burns, etc.). Exaggerated increases are often seen in the nephrotic syndrome.

Increased  $\beta$ -globulins are frequently seen in hyper- $\beta$ -lipoproteinemia and in nonfasting specimens; decreases rarely are encountered in hypogammaglobulinemia. This entity is rare in adults, and most commonly results from protein loss (e.g., burns), certain malignant lymphomas, and in "light chain myeloma," which lacks a demonstrable monoclonal serum protein band.

Most changes in the  $\gamma$ -globulin fraction reflect generalized increases in the serum immunoglobulins due to inflammatory or neoplastic disorders, the most common of which are the connective tissue diseases, chronic hepatic disease, infections, and epithelial malignancies. The broad  $\gamma$ -globulin fraction in such cases is quite different from the discrete band seen with the neoplastic immunoproliferative disorders (the so-called "M-protein" band), which results from the abnormal production of an immunoglobulin of a single class.

While much information can be gained by this type of evaluation, overall pattern interpretation is probably more helpful. Very common but nonspecific is the "acute response pattern," with increased  $\alpha$  (especially  $\alpha_2$ ) globulins and occasionally a mildly decreased albumin; this may be seen in many acute illnesses. When persistent, the  $\gamma$ -globulin fraction may later rise. Also frequent is the "hepatic cirrhosis pattern," with decreased albumin, and broad elevations of the  $\beta$ - and  $\gamma$ -globulins, frequently resulting in fusion of the two bands. Superimposed acute hepatocellular injury may elevate the  $\alpha$ -globulins as well. In the nephrotic syndrome classically is seen a pattern of markedly decreased albumin with prominent  $\alpha$ -globulin bands;  $\gamma$ -globulins are somewhat variable depending on the nature of the underlying renal disease. Occasionally helpful in the diagnosis of malignancies is a pattern of significantly depressed albumin with elevated  $\alpha_1$  and  $\alpha_2$ -globulins. Of specific diagnostic value is the presence of a monoclonal protein in the globulin zone; further discussion of this interesting entity will be the subject of a future column.

From the Department of Pathology, Methodist Hospital, Memphis, Tenn. 38104.

DEAN G. TAYLOR, M.D.



### HISTORY

This 61-year-old man was admitted for evaluation of recurrent chest pain, cardiomegaly and dyspnea on exertion. His electrocardiogram is demonstrated in Fig. 1.

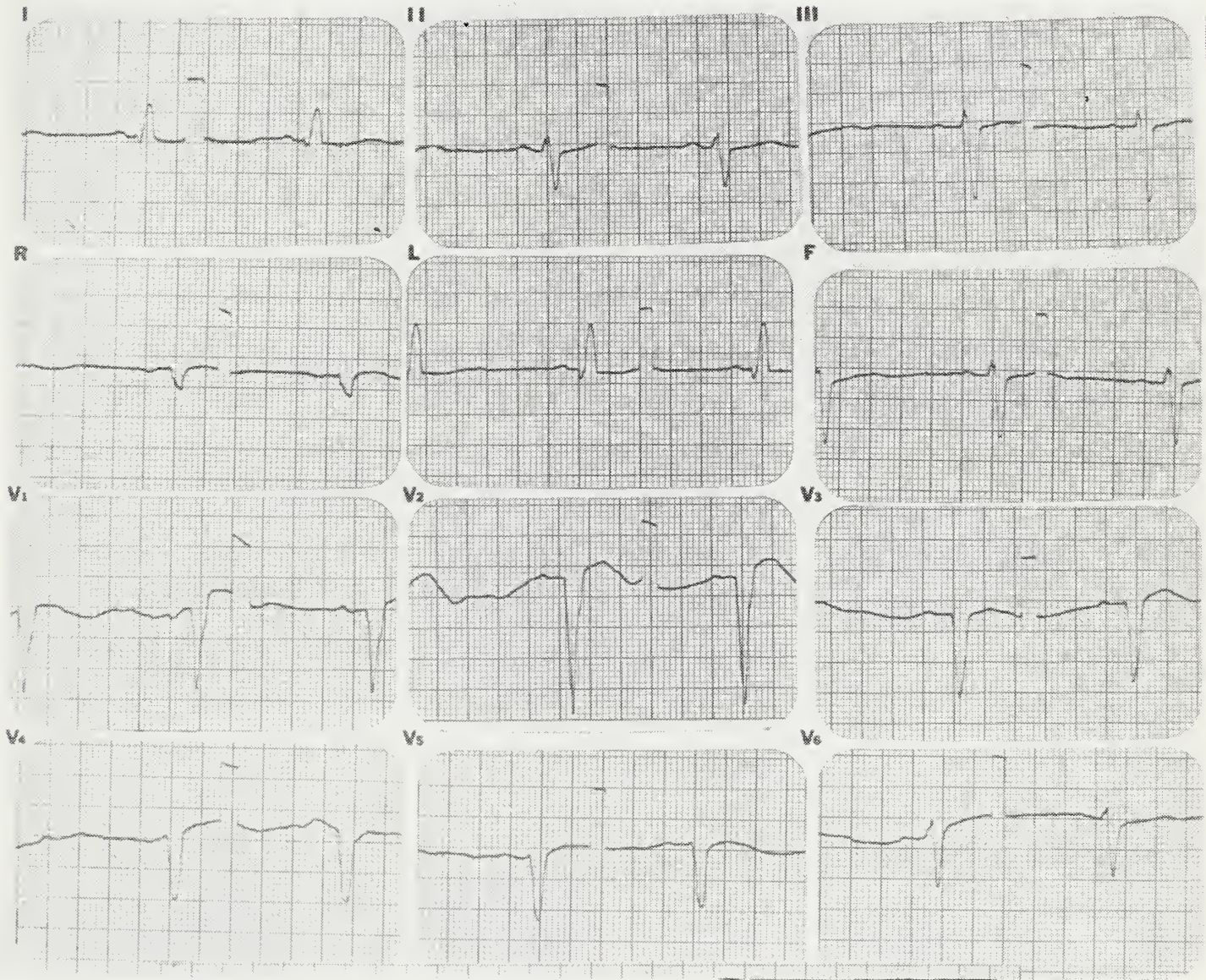


FIG. 1

### DISCUSSION

Various interpretations of the electrocardiogram were offered prior to left ventricular and coronary cineangiography. The QRS measures 0.12 seconds in width with the major delay noted terminally. Significant Q waves are noted in leads I and AVL along with absent initial anterior forces in  $V_1$  through  $V_4$ . The frontal plane QRS axis is approximately minus  $45^\circ$ . Does the electrocardiogram represent complete left bundle branch block (LBBB) with Q waves in leads I and AVL as evidence of anterior wall infarction, does it represent a nonspecific intraventricular conduction delay

(IVCD), or does it represent an old anterior wall myocardial infarction with abnormal left axis deviation due to left anterior hemiblock (LAH) and nonspecific terminal QRS slurring? In trying to deal with this rather difficult differential diagnosis it is useful to know that the angiographic study demonstrated disease of the anterior descending artery and a large area of anterior wall akinesis as evidence of a previously documented acute anterior wall myocardial infarction.

Complete LBBB typically obscures evidence of previous myocardial infarction, expressing itself as a delay in both initial and terminal QRS forces, and is not associated with significant rightward QRS forces.

LAD often occurs with no abnormal QRS

From the St. Thomas Hospital, Department of Cardiology, Nashville, Tenn. 37203.



widening but can increase the QRS by as much as 0.02 seconds. In this electrocardiogram it seems safe to interpret the Q waves in leads I and AVL along with absent initial anterior forces in the precordial leads as evidence of the previous myocardial infarction which also produced the LAH. The terminal QRS slurring probably represents disease of the peripheral conduction system in the area bounding the infarction or so called "arborization block," a

term more popular in ECG literature in years past.

Final EKG diagnosis: Old anterior wall myocardial infarction with left anterior hemiblock.

Final anatomic diagnosis: Old anterior wall myocardial infarction.

HARRY L. PAGE, JR., M.D.  
W. BARTON CAMPBELL, M.D.  
*Co-Directors*

\* \* \*

## Clinicopathologic Conference . . .

*continued from page 1142*

shown any further evidence of blastomycosis.

DR. YOUNG: Dr. Sutliff, do you think we occasionally see a case of blastomycosis which

is never diagnosed, other than with such a diagnosis as influenza or a bad cold or something of that nature which eventually goes on to heal itself?

DR. SUTLIFF: I think so.

\* \* \*

## Hypertension Reviews . . .

*continued from page 1143*

tachycardia, would be an alternative choice.

Following the initial reduction of pressure, it is imperative to prolong the hospitalization for several weeks in order to allow the arterial lesions to "heal," to insure good control prior to discharging the patient to the clinic. There is a wide variety of regimens for out-patient use. These agents can be characterized as volume depleters, adrenergic depleting and blocking agents, and vasodilators. Diuretics or volume depleters are the cornerstone of therapy because both the adrenergic depleting agents, guanethidine and methyl dopa, lose their effectiveness if volume is not concomitantly controlled. Similarly, the vasodilator hydralazine leads to fluid retention if administered alone. Propranolol has been used effectively to block the reflex tachycardia induced by hydralazine.

In those few patients who cannot be controlled on these drugs, a new investigational

vasodilator drug, minoxidil, has proved to be extremely potent and uniformly efficacious in severe hypertension with or without renal failure. If a patient is not responding to conventional treatment, he should be referred to a center where this drug can be obtained.

JOHN C. DORMOIS, M.D., and  
JOHN A. OATES, M.D.

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# TMA X-ray of the month

An 18-year-old white female was admitted with the chief complaint of pain in the left shoulder, which began after a fall injured the left shoulder six months prior to admission. The pain initially was mild and she did not consult a doctor until it persisted for one month. At the first visit to her local physician the clinical impression was that of a muscle strain. Mild pain persisted, but she was still able to play basketball. The pain gradually became more intense and developed a dull, steady component, which awakened the patient at night. She returned to her local physician and X-rays were made, which demonstrated a lytic lesion in the epiphyseal region of the left humerus. She was then referred to Vanderbilt.

Admission physical examination revealed diffuse tenderness throughout the deltoid area, without palpable mass. The axilla showed no adenopathy. Range of motion was limited only by pain. Her appetite and general health were good, without weight loss. The family history is significant in that her father had a bone tumor in his ankle which necessitated amputation. The pathology of his tumor is not known.

Laboratory examinations: A bone marrow examination was normal. Bone marrow particle examination showed peripheral blood only. The blood chemistries were normal. White count was 8,400. Hemoglobin 13.6 gm.%. PCV 39.6%. Urinalysis normal.

## X-Ray Findings:

X-Ray films, plain film (Figure I) and tomogram



FIG. I

FIG. II

From the Department of Radiology, Vanderbilt University Hospital, Nashville, Tenn. 37232.

(Figure II), of the left shoulder show a large, lytic lesion involving the epiphysis and diaphysis of the proximal left humerus. There is evidence of geographic bone destruction with a large, uniformly destroyed area with sharply defined edges at its proximal and distal margins. The lateral margins are characterized by moth-eaten destruction of the cortex. There are satellite lucencies extending distally down the shaft, and areas of linear bone condensation within the tumor, suggesting malignancy. Chest X-rays and lung tomograms were normal. X-ray diagnosis is malignant giant cell tumor. In the differential diagnosis are aneurysmal bone cyst, chondroblastoma, and when arising in the epiphysis, fibrosarcoma and chondrosarcoma.

## Clinical Course:

The patient was taken to surgery, and through a small window made in the proximal humeral shaft a yellow-gray firm tumor was seen, which was biopsied. Two days later the patient underwent curettement and bone grafting of the lesion in the proximal humerus.

## Pathology:

The original biopsy material was interpreted as giant cell tumor with active stroma. The material obtained at time of curettement and bone packing was interpreted as malignant giant cell tumor with malignant areas noted throughout the tumor, which are of the fibroblastic, osteoblastic and chondroblastic types. The basic tumor pattern is that of a giant cell tumor.

## Final Diagnosis:

Malignant giant cell tumor.

## Treatment:

The patient received irradiation of 6,000 rads in six weeks to the left humerus and scapula. Lung fields were given 1,800 rads in nine treatments. At a follow-up visit, three months post-irradiation, the patient was asymptomatic. There was no lymphadenopathy palpable in the neck, supraclavicular or axillary regions. The left arm was slightly swollen. The examination of the chest and abdomen were negative. Films of the left arm showed bone chips but no progression of the lesion.

## Discussion:

Giant cell tumors<sup>1</sup> are seen following fusion of epiphysis and diaphysis and are most commonly seen in people beyond the age of 20 years, with a peak incidence in the third decade. Pain is the most common presenting symptom. With tumor growth, pain and joint disability increase and local swelling and pathologic fracture may occur. There is a slight female predominance. Giant cell tumors are usually epiphyseal tumors, seen at the ends of long bones. The knee is the most common location. Other locations are pelvis, ulna, radius, humerus and sacrum. Giant cell tumors are infrequent in the spine



excluding the sacrum, or in the small bones of wrists or skull.<sup>4</sup>

#### *X-ray Features:*

Giant cell tumors are characterized by being (1) epiphyseal in location, (2) purely osteolytic without evidence of calcification or bone formation, (3) expansile and (4) very destructive; the margin, while abrupt, is indistinct. There is no sclerotic margin at the interface between the tumor and the normal bone. Periosteal new bone without pathologic fracture is distinctly uncommon. Bony septa in the tumor without previous biopsy, and presence of satellite lytic lesions, suggest a malignant process. X-ray features are fairly reliable, especially in the long bones, but are not diagnostic. Aneurysmal bone cysts are also expansile and can be very destructive. Benign chondroblastomas are epiphyseal in location and may be slightly expansile, but they are well demarcated and may show chondral calcifications. Chondrosarcoma and fibrosarcoma, when occurring in the epiphysis, can entirely simulate a giant cell tumor.<sup>2</sup> Giant cell tumors are less common in flat bones, and when they

occur there, the correct radiographic diagnosis can seldom be made with confidence.<sup>3</sup>

Giant cell tumors have a recurrence rate of 68% following curettement and a 34% recurrence rate following curettement and bone grafting.<sup>4</sup> The tumor has been graded into three categories on the basis of stromal cells, with grade III more likely to be malignant. However, prediction of subsequent tumor behavior is often difficult.

JANET HUTCHESON, M.D.

YING T. LEE, M.D.

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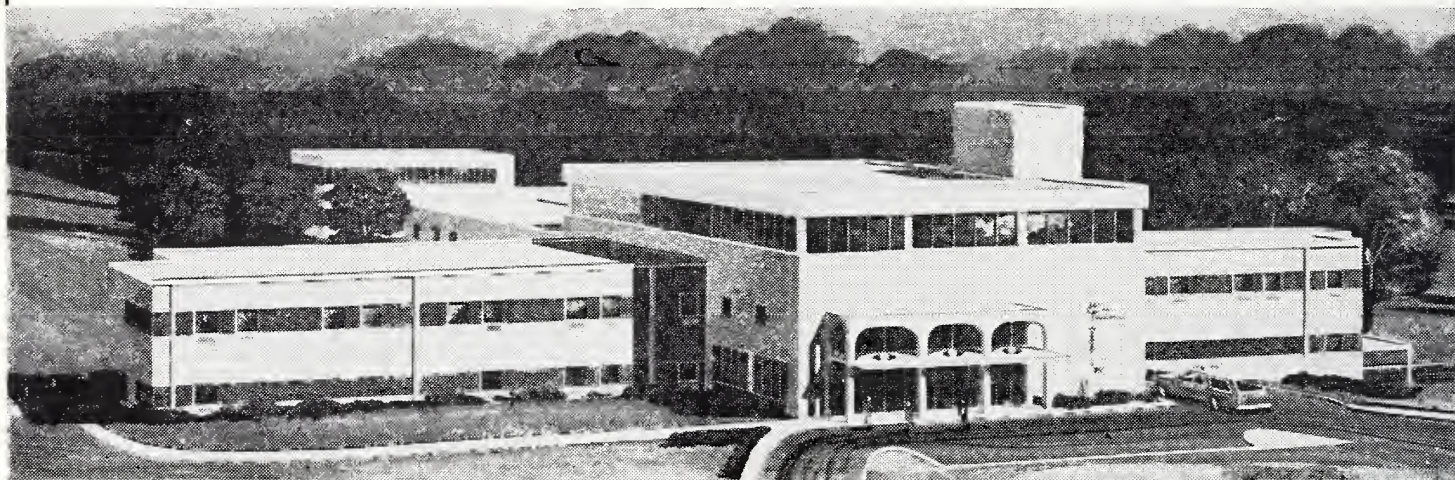
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\* \* \*

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Member of: American Hospital Association, National Association of Private Psychiatric Hospitals, Birmingham Regional Hospital Council.

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## Lateral Unilobular Thyroid Gland: A Report of Two Cases

Only a small number of palpable thyroid masses prove to be unilobular thyroid glands. Most of these are found in the midline in children and are associated with a hypothyroid state.<sup>1</sup> Even more uncommon is the laterally placed unilobular thyroid gland.<sup>2</sup> Since its first description in the English literature 1933, less than 45 cases have been reported. This report deals with two cases we have studied.

### REPORT OF CASES

**Case 1:** This 63-year-old man had a mass in the right side of his neck of two years duration which recently gave him a little trouble swallowing. There was no family history of thyroid disease. The mass was approximately four times larger than a normal thyroid gland and no other neck masses were palpated. His general health was excellent and he was clinically euthyroid. His T4 was 4.6 mcg% and his twenty-four hour I-131 uptake was 17%, both of which are in the mid normal range. A thyroid scan (Fig. 1) revealed a right unilobular thyroid gland with no radioactivity concentrated anywhere else in the neck. Following three days of TSH stimulation (ten units Q.D.) a repeat uptake was 48% and a repeat thyroid scan (Fig. 2) still showed no radioactivity on the left side of his neck. It was felt that he had total absence of the left lobe of his thyroid gland. Thyroid suppressive

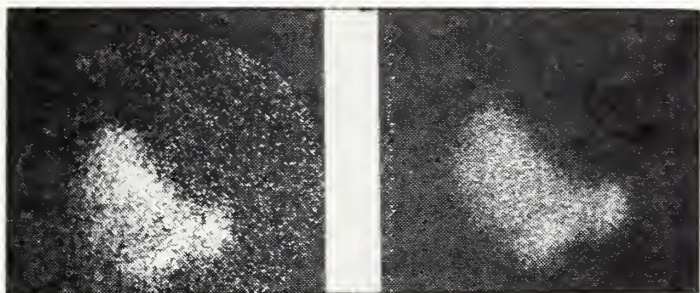


FIG. 1

FIG. 2 (TSH)

**Case 2:** On a routine physical examination three months earlier, an asymptomatic thyroid nodule was discovered in this twenty-one

therapy was recommended to shrink the size of the right lobe of his thyroid gland. year old man. He was in good health, was clinically euthyroid, and had no history of thyroid disease. The right lobe of his thyroid gland was approximately twice normal size and the left lobe could not be palpated. His T3 resin uptake was 39%, PBI of 6 mcg%, and twenty-four hour I-131 uptake of 19% were all in the mid normal range. A thyroid scan (Fig. 3) showed isotope concentration only in the right lobe of his thyroid gland. Following three days of TSH stimulation (ten units Q.D.) his twenty-four hour I-131 uptake was essentially unchanged (18%) and his thyroid scan (Fig. 4) still showed uptake only in the right lobe of his thyroid gland. The administration of two grains of desiccated thyroid daily for one year resulted in no change in the size of the gland.

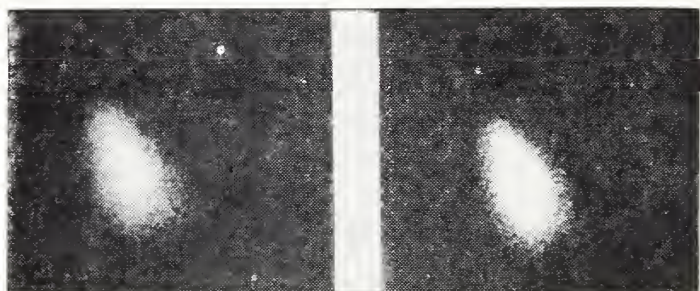


FIG. 3

FIG. 4 (TSH)

### COMMENT

The unilobular thyroid gland that is located in the midline in children is often confused with a thyroglossal duct cyst, particularly if the patient is euthyroid. When the unilobular mass is laterally placed, it is most commonly confused with a thyroid neoplasm or branchial cleft cyst. Removal always leads to hypothyroidism and in young children this may have very deleterious effects if untreated for a substantial length of time.<sup>3</sup> In the adult, lateral unilobular thyroid tissue usually occurs as a functioning nodule on the right and is evenly distributed among males and females. There is one report of the mass being present on the left,<sup>4</sup> and one report of a malignancy occurring in the mass.<sup>5</sup> Absence or agenesis of the left lobe can be established only by failure of uptake on the side opposite the

*continued on page 1151*

From the Nuclear Medicine Service, Park View Hospital, Nashville, Tenn. 37203.





## from the tennessee department of mental health

### 120,000 Reasons Why

In 1953, the late Governor Frank Clement made possible the establishment of the Tennessee Department of Mental Health. Prior to that date, the few mental health services available through state government were provided by the Department of Corrections, and the only state facility providing services specifically for mentally retarded individuals was Clover Bottom located in Donelson, Tennessee. Clover Bottom continued to be the only state operated program for retarded citizens in Tennessee until December, 1960 when Greene Valley Hospital and School opened its doors to serve retarded children and adults residing in East Tennessee.

It was not until the early 1960's, during the Kennedy Administration, that the needs and services inherent in the diagnosis of mental retardation became "in vogue."

During the decade of the 60's, it became increasingly apparent to many interested individuals and professionals that the concern demonstrated by the Kennedy Administration for services to meet the needs of retarded people would not be a passing fancy. So it was then that the administrative structure necessary to plan for and assist in the implementation of services for retarded citizens was born in Tennessee by the creation in early 1969 of the Division of Mental Retardation within the Department of Mental Health.

In the infancy stage of development, the Division of Mental Retardation offered services to retarded children and adults only through three large institutions. At one time, the population of these institutions totalled approximately 3,000. The services provided by these institutions include special education, speech and hearing, vocational rehabilitation, psychology, social work, occupational and physical therapy, laboratory, pharmacy, dental, and all appropriate consultative services in the medical specialties.

With a population of 3,000 residents and a waiting list of over 1,500, it was all too apparent to parents, professionals, and the general public that institutions were unable to meet the service needs of an estimated 120,000 mentally re-

tarded citizens in Tennessee. This same realization was experienced nationwide. It had also become apparent that not only could institutions not meet the ever-increasing service demands for residential care, but other services were needed as well. Congressional appropriations for community based services for retarded individuals first became available in late 1969.

With federal funds available and an increasing awareness that alternatives to institutional care were needed, the Division of Mental Retardation progressed to the toddler stage of development and created a section of community services charged with the responsibility of planning for and coordinating the development of community based programs. This section was born in 1970 and has been directly and/or indirectly responsible for the development of 46-day training programs operated by private, non-profit corporations for our mentally retarded citizens in Tennessee. At present, these day training programs serve approximately 3,490 individuals.

Today there is a new public awareness of mental retardation and its ramifications. The problem has lost much of its stigma and has become a legitimate topic of concern for medical, social, political, vocational, legal, and educational experts. The awareness of the dilemma of mental retardation has helped foster an acceptance of mentally retarded persons as human beings and, as such, should possess the same rights and dignities offered any other person. This human approach recognizes the fact that every mentally retarded individual, regardless of the severity of his handicap, has a potential for development and should be offered the opportunities to reach that potential.

Equally as important as the recognition of mentally retarded persons as developable human beings is the adoption of the concept of normalization as a criterion for judging the suitability and adequacy of programs. The goal is the achievement of a state which is normal or as near normal as possible. Life on a ward of the institution is not normal. For a 30-year-old male life at home with parents is not normal. Sharing an apartment with a peer is more nor-



mal for a young adult. Attending the same school, church, and movie theater that a child's brothers and sisters attend is normal. The achievement of normalization may not always be feasible or in the client's best interests in some individual cases, but the least restrictive alternative should always be chosen which will allow each mentally retarded person the broadest exercise of his human rights and privileges that his handicaps permit.

At this writing, the Department of Mental Health, Division of Mental Retardation, participates in funding over 80 separate and distinct community programs which include day training for children, adult activity, sheltered workshops, diagnostic and evaluation services, and several pilot types of residential programs. The drive toward community involvement in meeting the needs of mentally retarded citizens is still in the early stages. The needs are far from being met, but the accomplishments to date support the movement toward community development and provision of services by and in local communities.

One of the primary points in favor of community training and living for mentally retarded persons is the significant reduction in costs as compared to the operation of institutions.

Development of community programs to serve mentally retarded individuals and decentralization of the institution are integral parts of the same movement, i.e., provision of a more normalized environment and more adequate training possibilities.

The Division of Mental Retardation's guiding

philosophy for serving mentally retarded persons steadily emphasizes normalization of life experiences and recognizes the individual's right to a life with dignity. To reach the Division's goal of providing adequate and appropriate services to mentally retarded citizens, two primary objectives have been identified. These are the development of community based programs and decentralization of the three institutions. A 5-Year Action Plan to accomplish these objectives has just been completed by the Division and will soon be available for dissemination.

Here are things you can do now to help prevent mental retardation and bring new hope to those whose minds are retarded.

1. Urge all expectant mothers to stay under a doctor's or hospital's care.
2. Urge your community to establish training programs for retarded individuals.
3. Join your local Association for Retarded Children and Adults. If your community does not have an Association, write Tennessee Association for Retarded Children and Adults, 2121 Belcourt Avenue, Nashville, Tennessee and find out how to start a local association.
4. Select jobs in your business that mentally retarded people can fill and hire them.
5. Accept the mentally retarded as American citizens. Give them the opportunity to live useful, dignified lives in your community.

There are 120,000 reasons in Tennessee why you should become involved in the challenge for dignity for mentally retarded citizens.

\* \* \*

## Topics in Nuclear Medicine . . .

*continued from page 1149*

mass after a thyroid stimulation test has been done. The demonstration that hemiagenesis exists on the opposite side and that the mass concentrates radioactive iodine militates strongly against the mass being malignant. The side on which the agenesis exists frequently has both arteries missing and may have parathyroid tissue missing. This, of course, increases the risk of hypoparathyroidism when the mass is totally removed without knowledge that the thyroid gland on the opposite side is absent. The desirability of preoperative thyroid studies (including scan

and stimulation test) can hardly be over emphasized.

ROBERT L. BELL, M.D.

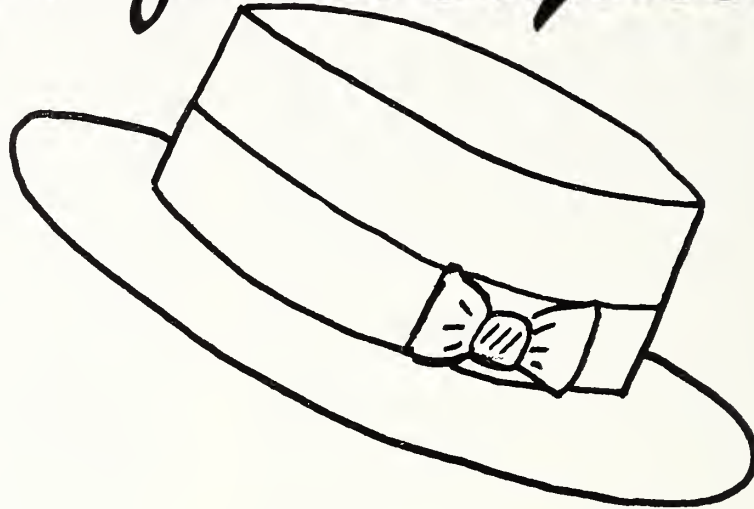
LAWRENCE K. WOLFE, M.D.

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**from the  
executive  
director**

**J. E. BALLENTINE**

# **MEDICAL DIGEST**

**NEWS OF INTEREST TO DOCTORS IN TENNESSEE**

## **RESUME OF OCTOBER TMA BOARD OF TRUSTEES MEETING**

The Board conducted its fourth quarter meeting in Jackson, Tennessee on October 14. Thirty-four items of business were acted upon . . . Among these actions, the Trustees heard committee reports submitted by the Division Coordinators; confirmed action to co-sponsor Medical Audit Workshop with the Tennessee Hospital Association; heard a report from the special Board committee meeting with members of the Tennessee Ophthalmology Society with regard to Physician's Assistants; confirmed Dr. Charles W. Cox, Jackson, to serve on the Speech Pathology and Audiology Board of the State, and acted upon a resolution, submitted by the Committee on Constitution and By-Laws for the method of seating medical students in the House of Delegates. This matter will be brought to the House of Delegates next year in a resolution from the Board.

\* \* \* \* \*

**TMA BOARD SUPPORTS REPEAL OF PSRO LAW . . .** The Board of Trustees on October 14, adopted a motion to support repeal of PSRO law as submitted through H.B. 9375 by Congressman Rarick of Louisiana. This places TMA on record, joining with other states, to repeal this portion of P.L. 92-603.

\* \* \* \* \*

**WINTER TRAVEL TOUR . . .** The Board's Travel Committee submitted its recommendations for the Winter Tour to be conducted January 4-11, 1974, by the Marriott Travel Agency to the island of Barbados. An entire hotel will be made available for the exclusive use of those making the tour. The Board approved the tour.

\* \* \* \* \*

**RESOLUTION PRESENTED FROM EAST TENNESSEE RADIOLOGICAL SOCIETY . . .** The Trustees considered a resolution from the East Tennessee Radiological Society concerning billing by radiologists. The Board adopted a motion to forward the resolution to the TMA Judicial Council to implement.

\* \* \* \* \*

**CLINICAL PHARMACY RESIDENCY IN PSYCHIATRY . . .** The State Board of Medical Examiners had submitted this matter and asked the TMA Board to study it. The Board's opinion was that such clinical pharmacy residency would be considered the practice of medicine performed by a non-MD. The Board adopted a motion that the program be opposed.

\* \* \* \* \*

**IN OTHER ACTIONS, THE BOARD . . .** Gave approval for TMA to co-sponsor, along with other states, a regional Mental Health Conference in Atlanta sponsored by AMA . . . Discussed a letter from Congressman Richard Fulton pertaining to self-employed pension plans including the Keogh Plan, and incorporated physicians. Agreement was in accord with the



revision in the law and Congressman Fulton will receive a letter from the Board thanking him for his assistance . . . Accepted two resolutions from the Memphis Medical Society, dealing with Mental Health Programs, and the second pertained to diagnosis and treatment by optometrists . . . Submitted the name of Dr. Robert H. Haralson, Jr., Maryville, to serve on the Medicaid Medical Advisory Committee of Tennessee; nominated Drs. William H. Edwards, Nashville, Burgin Dossett, Johnson City, and Charles Frost, Bolivar, as nominees for the Board of Nursing, one who is to be named by the Governor . . . Adopted a motion that the Board go on record to support mandatory insurance coverage of the newborn in Tennessee, and to support this issue in the Legislature . . . Approved the third quarter financial statement, and after thorough study and discussion, adopted the TMA budget for the fiscal and calendar year 1974 . . . Appointed Dr. John Nash, Memphis, to fill the vacancy on the TMA Committee on Hospitals, and recommended Dr. Jack S. Phelan, Maryville, to serve on a study commission on Workmen's Compensation.

\* \* \* \* \*

**LICENSING OF HOSPITALS** . . . The Hospital Licensing Board suggested that a representative of the TMA serve as a member of the task force to study the implications of licensing two or more hospitals not on the same premises, under one license. Dr. John Duckworth, Memphis, was named as the TMA representative to serve on the task force . . . Adopted a motion that Dr. R. H. Kampmeier undertake the updating of the history of TMA from 1930 through TMA's 150th year . . . The Board heard three proposals submitted by Dr. Satterfield concerning liability and malpractice coverage of Physician's Assistants under the TMA group plan. Requirements for such coverage to a Physician's Assistant must include educational training for at least two academic years by a college or university; a resume of complete training program be submitted by the applicant, and the employing physician must submit a job description outlining the way in which the Physician's Assistant is to be used under the direct supervision of the physician.

\* \* \* \* \*

**BLOOD INVENTORIES** . . . A serious problem in Tennessee and other states exists where the public has a lack of incentive in replacing blood. The reason is that insurance carriers pay for blood, which kills the incentive for a family to replace this service. The Tennessee Medical Association was urged by Dr. Duckworth to investigate the feasibility of legislation that will prohibit all health insurance carriers including Medicare and Medicaid, from paying for whole blood and blood components. It is not intended to include laboratory services and other related services. A motion was adopted that this matter be referred to the TMA Committee on Blood Banks and Medical Laboratories.

\* \* \* \* \*

**SPECIALTY LISTINGS IN TELEPHONE DIRECTORIES** . . . A copy of a special letter from the Licensing Board for the Healing Arts has been furnished to all county medical societies concerning "telephone specialty listings." In the interest of maintaining statewide consistency and equity in telephone directory listings, the State Licensing Board for the Healing Arts will continue to publish a recognized list of physicians' specialties, and suggested that any local medical society desirous of broadening specialty listings may do so by submitting such proposals to the State Licensing Board for the Healing Arts. TMA was urged to communicate this information to all local medical societies in Tennessee.



**public  
service**



## **COMMUNICATIONS • LEGISLATION**

HADLEY WILLIAMS, ASSISTANT EXECUTIVE DIRECTOR

**PHASE IV—NEWLY PROPOSED REGULATIONS FOR JANUARY, 1974 . . .** New regulations were published in the November 7, 1973 Federal Register revising the rules for physicians and dentists regarding price increases. The proposed system will: (1) eliminate cost justification as a requirement for price increases; (2) increase the aggregate annual weighted price increase limit from 2.5% to 4.0% and places a 10% limit on permissible price increases for any service over \$10 and \$1 increase for services under \$10; (3) allow for aggregate weighted price increases to be determined using weights based on previous calendar year's billings rather than projected volume of services and (4) shorten the length of time a profit margin test is in effect following a price increase. Thirty days are allowed for written comments from interested organizations. Also required is the posting of the availability upon request of base and current price schedules.

\* \* \* \* \*

**COST OF LIVING COUNCIL ANNOUNCES PROCEDURAL CHANGES . . .** A change in procedures for handling certain documents previously handled by the Internal Revenue Service has been announced by the Cost of Living Council. The documents affected are: (1) request for exception (2) request for reconsideration (3) request for interpretive ruling (4) notification of price increase (5) quarterly reports (6) complaints and inquiries and (7) Medicare intermediary referrals. The procedural changes are intended to effect the transfer of health activities under the Economic Stabilization Program from IRS to the Cost of Living Council. IRS will, however, continue to pursue compliance audits. Additional information regarding this matter is available by writing to Equitable Life, P.O. Box 1465, Nashville, Tennessee 37202.

\* \* \* \* \*

**UNIVERSAL CLAIM FORM NOW IN USE . . .** Universal health insurance claim forms are now available to physicians from AMA. For a number of years, the AMA has worked toward a standard health insurance form that would be acceptable to both the physician and the majority of the nation's commercial health insurance carriers. The newly developed form has been designed primarily by the AMA Council on Medical Service and its Committee on Health Care Financing and the National Health Insurance Council. The National Association of Blue Shield Plans indicates its endorsement of the form will not be determined until ten Blue Shield feasibility tests currently in operation are completed. Also, Medicare officials report that they will approve the form in lieu of the existing SSA form 1490 when other third party insurers in an area are willing to use it as their form. Likewise, the form is under review by Medicaid and recommendations regarding implementation will be forthcoming shortly for all state Medicaid programs. The Secretary of Defense indicates the form is under study to determine its possible use for all CHAMPUS beneficiaries. Any physician may order these forms by writing the AMA.



**CERTIFICATE OF NEED LEGISLATION . . .** Twenty-two states have enacted certification of need legislation to date. Six states have the legislation pending, it has been dropped or defeated in 11 states, has been repealed in one state and has not been acted upon in 10 states, according to a recent survey by the American Hospital Association. The survey also found that rate-review legislation has been enacted in ten states, is pending in five states, has been dropped or defeated in five states and has not been acted upon in 30 states. Three of those 30 states have voluntary rate-review programs.

\* \* \* \* \*

**ANTI-FRAUD PROVISIONS OF MEDICAID LAW . . .** A regulation requiring states to inform Medicaid providers and recipients of anti-fraud provisions of the Social Security Amendments of 1972 have been published in the Federal Register. HEW wants the states to spread the word that the law on Medicaid imposes penalties of \$10,000 or imprisonment up to one year, or both, for anyone soliciting, offering or accepting kick-backs, bribes or rebates; for concealing information affecting a person's right to Medicaid benefits or payment with intent to defraud, or for converting benefits to improper use.

\* \* \* \* \*

**INFANT MORTALITY RATE CONTINUES TO DROP . . .** The National Center for Health Statistics reported the July infant mortality rate was the lowest ever recorded in this country, 16.7 per 1,000 live births. Lowest annual U.S. rate was in 1972, at 18.2 per 1,000.

\* \* \* \* \*

**CULTISM UNDER MEDICAID . . .** Proposed regulations setting conditions for payments to chiropractors under State Medicaid Programs where permitted were announced last month by HEW's Social and Rehabilitation Service.

The regulations limit chiropractors' services payable by Medicaid to manual manipulation of the spine to correct a subluxation demonstrated by an x-ray to exist. Thus, as pointed out in an August 23 address by H. Thomas Ballantine, M.D., Chairman of the AMA Committee on Quackery, chiropractors will be receiving public monies under Medicaid and Medicare "for a procedure that, according to one of their leaders, they do not make the claim to perform."

Dr. Ballantine offers as one authority for this statement a 1971 letter from the Vice President of the Palmer College of Chiropractic to a physician whose group was interested in studying chiropractic x-rays. The chiropractor's letter states: "I would like to point out to you . . . that chiropractors do not make claim to be able to read a specific subluxation from an x-ray."

Added commentary on this remarkable inability is offered in an article titled "A Scientific Test of the Chiropractic Theory" (Sept.-Oct., 1973, American Scientist), by Edmund S. Crelin, Ph.D., professor of anatomy at Yale University School of Medicine. Summarizing the results of applying and measuring compressive forces to the vertebral columns of both male and female subjects, the author concludes:

"This experiment demonstrates conclusively that the subluxation of a vertebra as defined by chiropractic, which exerts pressure on a spinal nerve and interferes with the planned expression of Innate Intelligence to produce pathology, does not occur."

On the evidence above, it would appear that the Federal and State governments are preparing to spend public monies under Medicaid and Medicare for a condition so nebulous that the practitioners who propose to correct it are not sure that they can find it.





MORSE KOCHTITZKY

## president's page

In all of the previous issues of the JOURNAL during my tenure as President, I have found it necessary to write about only the dilemmas that Medicine faces, and the serious problems that we are trying to solve. It gives me a great deal of pleasure to take this opportunity to remind you of one of the enjoyable services provided for members of the Tennessee Medical Association.

This seems a good time to recount for you the travel opportunities offered by your Association, inasmuch as you have just recently been notified of the trip to Barbados in early January. This is the second warm weather winter time trip (Hawaii last year) TMA has had the privilege of offering. This should be an enjoyable excursion. It is being offered by Marriott World Travel and it should be a delightful trip. If 140 physicians and their families choose to take this trip, we will have the use of an entire hotel which is an old castle converted for our pleasure. This, incidentally, might mean that the plane will not be quite so crowded either, since the castle can only accommodate 140 people.

Our previous trips with INTRAV Travel Agency have included the Orient, the Mediterranean cruise, and our Scandinavian adventure this past August. All of these have been quite successful, beautifully arranged, with excellent guides, exceptional choice of restaurants, the opportunity to see in some depth the countries that we visited, to say nothing of excellent and timely medical seminars while we were on the trip. There is reason to think that our adventure in Central Europe (Geneva, Vienna, and Berlin) next September will be equally superb. INTRAV is also in a position to have in the next few months their own cruise ship, so we can look forward to some happy times on tours similar to the very excellent Mediterranean adventure—maybe to the Caribbean the following winter.

Sincerely,

President

P. S. Just so we don't get too far away from some of the more serious aspects of Medicine, let me remind you that during these rather trying political times, nothing seems to me to be more appropriate than our membership in our IMPACT and AMPAC organizations. As you know, all funds contributed to IMPACT and AMPAC from physicians and their wives go directly to candidate support activities. In spite of the "political upheaval" that we seem currently to have with us, I would stress to you the importance of having good friends in both the United States Congress as well as the General Assembly of the State of Tennessee. Tennessee should have the highest percentage of IMPACT and AMPAC members of any state since we are that sort of interested, forward-looking citizens.



# A Christmas Legend

*In 1968 Edward T. Newell, Jr., M.D., then President of TMA, ran the item below as his December President's Page. I was much taken with it then, as I still am. Our country was involved in an unpopular war and there were riots and demonstrations in our cities and on our campuses, which were to intensify. Today the inner workings of our political system, though nothing new, have been bared and smeared across our newspapers and aired on TV to the point that this as well as the scandal itself is a national disgrace. I therefore reprint the item without apology, and with thanks to Ed for making it available the first time. We need as a nation and as individuals as never before to look closely and keep before us the lovely face of Jesus the Christ. Maranatha—J.B.T.*

A Chinese photographer was riding one day through the snow covered countryside of interior China. His soul was troubled. He had been witnessing a great movement toward Christianity among his friends since the Japanese invasion. He longed to know the truth of what he had been hearing from Christian missionaries. As he rode along, he said, "Lord, if I could only see Thy face, I would believe." Instantly a voice spoke to his heart, "Take a picture! Take a picture! He looked out at the melting snow, forming pools of water and revealing here and there the black earth. It was an unattractive scene. Nevertheless, being thus strangely compelled, the man descended and focused his camera on the snowy roadside. Curious to know the outcome of the incident, he developed the film at once on returning to his home. Out from among the black and white areas of the snow scene a Face looked at him, full of tenderness and love—the face of Christ! He became a Christian as the result. And because the Chinese people think that God has in this wonderful way revealed Himself to them in the hour of their trial, many have since found the Saviour through the picture, as the story of it is told in various parts of China.



Perhaps some of you will take the time to study this Rorschach ink blot type of picture. In time you should be able to see very clearly the lovely face of Christ.



# Journal

OF THE

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DECEMBER, 1973

# editorials

## Laboratory Proficiency Evaluation

I should like to call your attention to an article entitled "Proficiency Testing in the Physician's Office Laboratory" reprinted from the *Southern Medical Journal*, and found on page 1138 of this issue. It gives some statistics and some good reasons why you should subscribe to the Proficiency Evaluation Program of the College of American Pathologists, available through TMA.

Do you *know* that your laboratory results are accurate? Unless you have a quality control program, there is no assurance that they are, and in fact, on the basis of a broad survey, there is every reason to believe that at least some of them are not. Unfortunately, it is a part of our human condition that we are perfectly will-

ing to believe, in this as well as other areas, that while it may be true of others, "it can't happen here." It can.

How much do you really care about your patients' welfare? Enough to spend a few lousy bucks a year for them, to check on your lab? Or are you afraid you might find something wrong, and have to change some things? You might. In fact, based on experience gained from the program, you almost certainly will.

You owe it to your patients to give them accurate results. But you also owe it to yourself to be the best doctor you know how to be. And you can't do it if your laboratory turns out wrong answers.

J.B.T.

## ... Whenever They Die

Carried as a Special Report on page 1182 of this issue of the JOURNAL is a summary of the report from the President's Committee on Health Education. It touches on an area which is given far too little attention by physicians—that of Public education on health matters. It states that many, perhaps most, major causes of sickness and death can be affected, and some prevented, by changes in individual behavior, and yet "no agency inside or outside the government is responsible for, or even assists in, setting goals, maintaining criteria of performance, or measuring results."

All of us are aware of the importance of preventive medicine, and practice it to a limited extent insofar as our individual patients are concerned, but only in pediatrics is there any real dedication to the concept. Completely ignored, and cast adrift in a sea of pseudo-scientific articles in the lay press, is the bulk of the population, who will not see one of us until he is already sick.

The old saw that an ounce of prevention is worth a a pound of cure remains true. We say we are too busy. But lives are lost, and youth and health fade needlessly because of ignorance, and worse, apathy. Public education requires first the dissemination of facts, such as the fact that carcinoma of the cervix can be prevented by periodic "Pap" smears, or the fact that smoking produces lung cancer, emphysema, neuro-circulatory disturbances, and ulcers. These facts are spread by billboards, TV, newspapers, magazines, and what have you.

The dissemination of facts can be easily accomplished, but effective health education is



something entirely different. It requires more than facts. The missing element is motivation. Individuals must be motivated to apply the disseminated facts, and this can be done only as they appropriate these facts to themselves, and see that they are not meant for the other fellow only. Reference is made in the report to the haphazard manner in which school health education programs are handled, and the often ineffective materials used. No one is better equipped for this role than the physician, and in fact unless we do it, the chances are it will not get done.

I should like to challenge you to take seriously public health education, and to consider your possible role in it. Efforts are being made by many groups, such as for example the American Cancer Society and The American Heart Association, and by your own medical organizations. The "Killer Series" reported on in the October issue of the JOURNAL is a case in point. But have you personally done anything about it?

It seems to me that we should carry our mission to heal the sick a step further. Perhaps our goal should be to help each person to die young—whenever he dies, and as late in life as possible.

J.B.T.



FOSTER, COL. WILLIAM BELL, Cleveland, died October 29, 1973, age 80. Graduate of Vanderbilt University, 1916. Member of Bradley County Medical Society.

FREEMAN, LUTHER M., Granville, died November 5, 1973, age 94. Graduate of University of Tennessee, 1905. Member of Upper Cumberland Medical Association.

GHOSH, ASOKE KUMAR, Waynesboro, died October 9, 1973, age 44. Graduate of Calcutta University, Calcutta, West Bengal, 1955. Member of Lawrence County Medical Society.

JOHNS, DANIEL JAY, V, Nashville, died October 22, 1973, age 75. Graduate of Vanderbilt Medical School, 1926. Member of Nashville Academy of Medicine and Davidson County Medical Society.

MYERS, ROLAND H., Memphis, died October 15, 1973, age 59. Graduate of University of Tennessee, 1937. Member of Memphis-Shelby County Medical Society.

## new members

The JOURNAL takes this opportunity to welcome these new members of the Tennessee Medical Association.

### CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Samuel L. Banks, M.D., Chattanooga  
Francisco C. Vallejo, M.D., Chattanooga  
Dexter L. Woods, Jr., M.D., Chattanooga

### HAMBLEEN COUNTY MEDICAL SOCIETY

David L. Greene, Jr., M.D., Morristown  
Jose Wee-Eng, M.D., Morristown

### MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

Borivoj S. Divcic, M.D., Memphis  
Lois L. Dow, M.D., Memphis  
Telmo A. Galindez, M.D., Memphis  
Thomas F. Goodman, Jr., M.D., Memphis  
Thomas I. Miller, M.D., Memphis

### NASHVILLE ACADEMY OF MEDICINE

Terry R. Allen, M.D., Nashville  
H. Victor Braren, M.D., Nashville  
Reuben A. Bueno, M.D., Nashville  
H. Keith Johnson, M.D., Nashville  
James M. Perry, Jr., M.D., Nashville  
Divina Tan Po, M.D., Madison  
Giog Sing Po, M.D., Old Hickory  
Richard P. Schneider, M.D., Nashville  
Fasih U.S. Samad, M.D., Nashville

### RUTHERFORD COUNTY MEDICAL SOCIETY

Charles A. Huffington, M.D., Murfreesboro  
David L. Hudson, M.D., Murfreesboro  
James A. Starrett, M.D., Murfreesboro  
Robert P. Tuma, M.D., Murfreesboro

### WASHINGTON-CARTER-UNICOI MEDICAL ASSOCIATION

Alfonzo Lopez, M.D., Johnson City

## programs and news of medical societies

### Knoxville Academy of Medicine

The Knoxville Academy of Medicine met on November 13, 1973 at the KAM Headquarters Building.

The Scientific meeting consisted of: Surgery, Dr. A. W. Biggs and Dr. I. Reid Collman, who spoke on, "G.I. Endoscopy"; Pediatrics, Dr. Thomas E. Lester, who spoke on, "Statistical Analysis of Intensive Care Nursery Outcome"; Ophthalmology, Dr. Edward M. Malone, who spoke on, "Neuro-Ophthalmology"; and Radiology, discussed films of participative members. Anesthesiology meeting was held on November 12th with Dr. Gunter Corssen, Chairman, Department of Anesthesia, University of Alabama as guest speaker.

JOURNAL OF THE TENNESSEE MEDICAL ASSOCIATION



## Memphis-Shelby County Medical Society

The Society met on November 6, 1973 at the Wassell Randolph Student Center. The Scientific speaker was Dr. Irving B. Perlstein, Associate Clinical Professor, Department of Internal Medicine, University of Louisville College of Medicine. His subject was "Metabolic Abnormalities of Obesity—A Challenge to Today's Physician."

The House of Delegates met at 8:00 P.M. following the Scientific Session.

## Nashville Academy of Medicine

The Academy met on November 13, 1973 at Baptist Hospital. Dr. Alan Nies, Associate Professor of Pharmacology, Vanderbilt School of Medicine, spoke on "Clinical Disorders of Drug Interactions."

A Nominating Committee met and selected candidates for 1974 Academy Offices.

A Medicine and Religion Seminar was held at the West End United Methodist Church on November 8, 1973 with 65 Physicians and Clergymen in attendance. The topic of discussion was "Basic Issues in the Care of the Critically Ill."

The Board of Directors met on October 16, 1973 at the University Club, and approved an increase in advertising rates for the Academy Directory; directed that ad hoc committee be appointed to study a recommendation to form a Membership Committee; and accepted a progress report on the Academy-sponsored auto leasing program.

## Roane-Anderson County Medical Society

The Society held the Dwight E. Clark Memorial Lecture on November 1, 1973. Guest speaker for the lecture was Dr. Lester R. Dragstedt, gastro-intestinal surgeon and physiologist.

Dr. Dragstedt is the only speaker who has delivered the annual lecture twice. He first spoke in the early 1950's.

The annual lecture is sponsored by the Roane-Anderson County Medical Society. It memorializes Dr. Dwight E. Clark, an Army doctor in Oak Ridge during his early days, who in 1949 left Oak Ridge to become head of the Department of Surgery at the University of Chicago. Soon after that, he died suddenly from an attack of acute hepatitis.

## national news

### THIS MONTH IN WASHINGTON (From Washington Office, AMA)

The debate concerning the right of large states to establish statewide Professional Standards Review Organizations (PSRO's) has apparently come to an abrupt halt with the government saying "no" in a loud and clear voice.

The Department of Health, Education and

Welfare announcement came only 10 days after it had released a statement that said under certain circumstances it would consider naming a statewide PSRO in big states where there is support for it among the interested medical and health groups.

Though an about face was denied by Henry Simmons, M.D., Deputy HEW Assistant Secretary for Health and acting head of PSRO, there was an apparent conflict between the statement given earlier to the PSRO Advisory Council and the final decision.

The designated PSRO areas which will be announced by late November or early December will include no area having many more than 3,000 physicians within it, Dr. Simmons told a news conference in his office. He conceded there is no such limitation in the PSRO law, but the 2,500-physician level suggested in the report by the Senate Finance Committee was "reasonable" but not "rigid."

The area selections will be in the form of proposals printed in the *Federal Register* giving interested parties 30 days in which to comment. The possibility remains that some changes could be made before the designations become final, but Dr. Simmons did not talk as if there was much chance of that happening.

In the earlier statement given the Advisory Council, Dr. Simmons said: "There are a few states with a larger number of physicians that have requested that they also be designated as single state PSRO's and have obtained backing of their medical, osteopathic, and hospital associations and, in some instances, government. In such instances, we will individually consider designation of a statewide PSRO if the statewide PSRO has support of physicians throughout the state and agrees to further subdivide itself . . . and if control of the review process remains at the local levels. . . ."

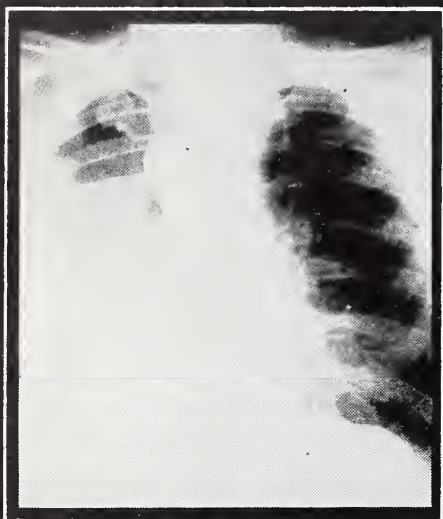
"Thus, in states with a large number of physicians which nevertheless opt for a statewide PSRO, it is clear that the review of care would be controlled and performed locally. . . ."

Members of the Council interpreted this as indicating that HEW in some cases might okay a statewide PSRO in large states.

Dr. Simmons also told the news conference that guidelines will be issued in February on how organizations can apply to become PSRO's within the designated areas. By next June, he said, the hope is to have 50 PSRO's chosen. Within four to six weeks a PSRO bulletin will



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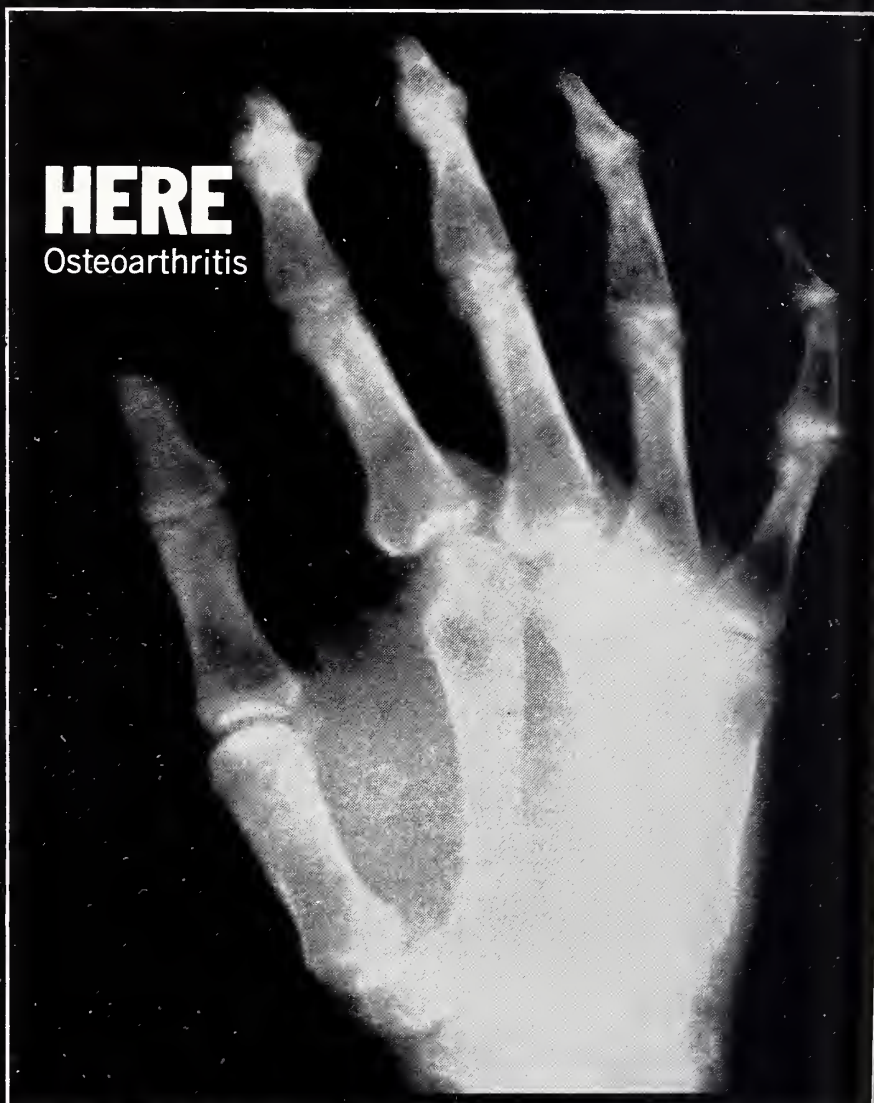


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be sent to all physicians in the nation outlining the status of the program and informing them of PSRO developments.

He predicted from 20 to 30 small states will be single-state PSRO areas.

PSRO, said Dr. Simmons, is "probably the most sensitive program that has been mandated" for the medical profession "and one of the most important ever passed in terms of impact upon the profession and benefit to the public."

He praised the AMA for "very constructive steps" in developing diagnostic standards for PSRO and "very constructive work in general" with HEW in gearing up for the program. He conceded a difference of opinion with the AMA on the extent to which PSRO's would function at the state level.

\* \* \*

Prior to the HEW decision against statewide PSRO's in large states, the Senate Finance Committee had tentatively approved a provision that would ban HEW from using a limitation on the number of physicians that may belong to a PSRO.

If enacted, the provision could make it easier for statewide PSRO's to win HEW approval.

At present, the Department is employing a general top limit of 2,500 physicians per review organization, a maximum guide that obviously would foreclose larger states from having a single organization to review institutional care for Medicare and Medicaid patients.

The amendment was sponsored by Sen. Lloyd Bentsen (D.-Texas) and agreed to by Sen. Wallace Bennett (R.-Utah), originator of the PSRO concept and a staunch proponent of smaller PSRO units.

The language of the proposed Bentsen amendment reads: "In carrying out the provisions of this section, the Secretary may designate, as an appropriate area with respect to which a Professional Standards Review Organization may be designated, an area encompassing a whole State; and the Secretary shall not refuse to designate any qualified organization as the Professional Standards Review Organization with respect to such area solely because of the number of physicians participating in such Organization."

Whether or not the Senate committee action on a House-passed measure making technical changes in the Social Security Law would result

in a significant change in HEW PSRO policy is not known at this time.

\* \* \*

The present Congress won't act on a full-scale national health insurance program, predicts Sen. Wallace Bennett (R.-Utah).

Bennett, top Republican on the Senate Finance Committee which has jurisdiction over NHI, said such a national program would require new taxes to finance it.

"Congress is keenly aware of a strong and growing resistance to any increase in taxes for any purpose," he said. "To complicate the situation further, there is a real rivalry between the Administration and the Congress as to which can demonstrate the greatest fiscal responsibility."

I don't believe the people really realize just how great the added tax burden must be to provide the billions needed to support some of the large-scale programs which have been proposed," Bennett said, adding that a health care bill sponsored by Sen. Edward Kennedy (D.-Mass.), would cost "an estimated \$70 billion."

Although ruling out the possibility of Congressional action on a full-scale national health insurance program, Bennett said it was possible that Congress might act on "some limited type of catastrophic health insurance coverage and improvements in Medicaid."

The Senator was referring apparently to the bill introduced by Finance Committee Chairman Russell Long (D.-La.) and Sen. Abraham Ribicoff (D.-Conn.), recently for a Social Security-financed catastrophic plan and federalization of Medicaid.

\* \* \*

A growing public and professional awareness of the perils and prevalence of alcoholism and indications society finally is gearing to grapple with the problem meaningfully were reported at the Conference on Medical Complications of Alcohol Abuse presented by the American Medical Association in Washington, D.C.

Cautious optimism, a feeling that perhaps a corner had been turned, marked the attitudes and statements of many of the 300 speakers and participants at the Conference co-sponsored by the National Council on Alcoholism and the National Institute on Alcohol Abuse and Alcoholism (NIAA).

The meeting came at a time Congress is voting millions of additional dollars for federal alcoholism programs and the Administration



is upgrading the effort within the HEW Department.

Morris Chafetz, M.D., Director of the NIAA, said, "it is time we stopped blaming sick people for their own illness and our inability to provide appropriate treatment—especially since the care-givers are in fact the very ones who have conspired to stack the cards against them."

The AMA first recognized alcoholism as an illness back in 1956, Dr. Chafetz said, "yet even today more than half of our nation's hospitals will not admit patients with a primary diagnosis of alcoholism."

The medical profession itself loses 400 physicians, the entire enrollment of a medical school, to alcoholism every year, the psychiatrist said. "When we measure the magnitude of human suffering against the plain reality that alcoholic people are indeed treatable, then I believe that the biggest tragedy and shame of all will occur if the health and medical professions continue to fail to exercise their proper responsibility to help the millions of victims of this epidemic illness."

Another speaker, Maj. Gen. Frank Clay, Deputy Assistant Secretary of Defense, (Drug and Alcohol Abuse), cited "noticeable progress" in the military's six-month-old attack on the tradition of the GI as not only a hard fighter but a hard drinker. "Treatment will be available for every individual who wants treatment for alcoholism," Gen. Clay said.

Harry McKnight, Jr., of the Veterans Administration, said the VA operates the nation's largest unified system of alcoholism rehabilitation with 61 special units that handled 131,000 alcohol abusers in the fiscal year 1973.

Marvin Block, M.D., Buffalo, N.Y., said "it is the obligation of the physician and hospital medical staffs as well as other personnel to see that the alcoholic patient receives the treatment indicated in the same way as any other sick person—with care and consideration. When this attitude becomes more prevalent, the stigma of the disease will be removed and people will present themselves for help before the disease is far advanced.

"With the medical profession as the central focus of detection and treatment, the scourge of alcoholism which is so prevalent today can be successfully defeated," he added.

Herbert Raskin, M.D., Chairman of the AMA's Committee on Alcoholism and Drug Dependence; and William Lukash, M.D., White

House physician and program coordinator, told the meeting that such conferences help pave the way toward new attitudes by members of the medical profession and instill the knowledge necessary to cope with the problem of addiction to alcohol.

\* \* \*

The total cost of educating a medical student in 1972 ranged from \$16,000 to \$26,000 a year in 12 selected medical schools, the Association of American Medical Colleges reported. Direct instructional expenses accounted for about 40 percent of the total educational costs for an undergraduate medical student. Research, clinical activity, and administrative and professional activities accounted for the remainder.

\* \* \*

The American Medical Association has proposed a regional center national blood program to resolve the differences among major blood-collecting organizations and meet the threat of a Federally-mandated program.

At a meeting of interested groups, including labor and consumers, at the HEW Department, there was praise for the AMA plan from some participants. But a consensus has not developed immediately. At the AMA's suggestion, a third meeting was called to be held by the AMA in Chicago in a further attempt to respond to the directive of HEW Secretary Casper Weinberger that a national voluntary blood donor system be set up by existing agencies or he will impose a solution through legislation or fiat.

\* \* \*

The American Medical Association has told the Congress that legislation is now appropriate to assure the safety and effectiveness of medical devices.

However, William R. Barclay, M.D., AMA's Assistant Executive Vice President, told the House health subcommittee that controls should be kept to a minimal level to assure that regulations will not restrict the flow of useful devices to the marketplace.

"Device standards must be practical," Dr. Barclay said, "and while they should strive fully to meet the goals of protection and safety, they must be realistic and not withhold from patients the benefits of scientific advances."

\* \* \*

The HEW Department has sent the White House a proposed national health insurance program weighted toward catastrophic coverage.

Though HEW aides insisted the plan was



more of a "series of concepts" than a final program, the broad outlines of the HEW scheme are likely to be retained in the final bill sent to Congress next year by President Nixon.

The old mandated employer idea is retained in the new plan. Through private health insurance companies, companies must offer employees minimum benefit insurance protection and pay 75 percent of the premium tax. Enrollment in a Health Maintenance Organization (HMO) must be allowed workers as an option if available. The label given this plan is Standard Employer Plan (SEP).

For poor people, a Government Assurance Program (GAP) would replace Medicaid. This would offer sliding-scale Federal subsidization for health insurance that would have the same minimum benefits as the SEP plan. The very poor would pay nothing for the premium; those making more would pay up to \$300 a year.

Higher income people not covered by SEP could enroll in GAP.

In no case, under the HEW draft, would any family have to pay out-of-pocket more than \$1,600 a year in health bills.

The proposal would provide coverage of hospitalization, most physicians' services, some mental health care, limited dental care, and out-patient drugs on a deductible basis. Estimated total costs of the SEP premium is \$600 annually.

The plan calls for a medical credit card for all enrollees. Insurers would pay providers and bill patients for services not covered.

## medical news in tennessee

### **Tennessee Valley Medical Assembly Has Excellent Attendance**

The Tennessee Valley Medical Assembly drew about 350 doctors and their wives to Chattanooga for a two-day annual meeting at the Read House. The event consisted of symposia and addresses by eminent physicians from throughout the United States.

### **U.T. Medical Units Start Health Column**

A series of weekly columns from the University of Tennessee College of Medicine, designed to help improve the health of the people of

Tennessee, will begin in the Lake County Banner on October 4, 1973.

The column, called "House Calls," will be concerned with preventive medicine and the conservation of health.

### **Edmund D. Pellegrino, M.D., Named U.T. Medical Units Chancellor**

Dr. Edmund D. Pellegrino has been named chancellor of the University of Tennessee Medical Units at Memphis, to succeed Dr. Joseph E. Johnson who has moved up to a top new position in the statewide UT system.

The change, announced by UT President, Dr. Edward J. Boling, and the UT Board of Trustees, was effective October 15, 1973.

Pellegrino has been since 1966 at the State University of New York at Stony Brook, where he was director of the Health Sciences Center and vice president for health sciences. In Tennessee, he will carry the title of vice president for health affairs of the UT system, in addition to that of chancellor.

### **Vanderbilt Medical Center Dr. Mildred Stahlman Awarded Honorary Degree**

Mildred T. Stahlman, M.D., professor of pediatrics at Vanderbilt Medical Center, was awarded an honorary Doctor of Medicine degree by the University of Gothenburg, Sweden, on Saturday, October 20. The degree is in recognition of her outstanding work in the field of newborn pulmonary physiology.

Dr. Stahlman is one of the foremost authorities on hyaline membrane disease, which afflicts many premature babies. The disease, which strikes as many as 60,000 infants a year in the United States, attracted public attention several years ago when it took the life of the infant son of President John F. Kennedy.

A Phi Beta Kappa graduate of Vanderbilt, arts and sciences and the school of medicine, Dr. Stahlman served as an exchange fellow at Stockholm's Royal Caroline Institute of Medicine from 1949 to 1950. In recent years, scientists from the University of Gothenburg have come to Vanderbilt to work with Dr. Stahlman. She and her colleagues in Sweden have been engaged in similar research. During the summer of 1972, she was on the faculty of the Institute for three weeks as visiting professor.

A member of the medical faculty at Vanderbilt since 1951, Dr. Stahlman received the



Lederle Medical Faculty Award in 1961 and 1962. She has published widely, and has served as president of the Southern Society for Pediatric Research.

In Sweden, the M.D. degree is not given upon graduation from medical school, but is a graduate degree given upon completion and defense of a thesis. Customarily, it is sought by doctors in academic medicine. The honorary M.D. is given only rarely in recognition of distinguished achievement.

### **Pennsylvanian First Glenn Koenig Visiting Professor at VU**

Donald Kaye, M.D., professor and chairman of the department of medicine at the Medical College of Pennsylvania, Philadelphia, was the first M. Glenn Koenig Visiting Professor of Medicine at Vanderbilt Medical Center. The principal Koenig Memorial Lecture was given on Thursday morning, November 8. Dr. Kaye's topic was "Changing Pattern of Bacterial Endocarditis."

Friends and associates of the late Dr. Glenn Koenig established this visiting professorship in his memory as "an appropriate way to pay tribute to the contributions he made to the medical community of Nashville and to American medicine."

In describing the Koenig Visiting Professorship, departmental spokesmen hoped to establish a short term program which might extend the special type of informal bedside teaching which Dr. Koenig was so capable of achieving. "Glenn's influence was due largely to his warmth and wit, best revealed in informal contacts. This visiting professorship will also allow the visiting physician to be revealed as a person as well as a teacher," they said.

### **Killer—Pulmonary Disease (January 14, 8-9:30)**

An estimated 150,000 Americans die each year from diseases of the lungs—pneumonia, asthma, chronic bronchitis, emphysema, lung cancer, black lung, white lung, pulmonary edema, and a host of lesser-known conditions. Pulmonary disease is the fifth largest cause of death in the U.S., and is responsible for 80 percent of all deaths in the first week of life. Because of lung disease, 60 million work days are lost each year, at a cost to the nation of \$10 billion.

The most vulnerable of all body groups, the

lungs are, at the same time, the most resilient of human organs. Continuously exposed to environmental hazards, they are protected from insult by a variety of defense mechanisms, which man has bypassed or negated in this past century.

Aerosol sprays, automotive emissions, and cigarette gasses are only a few of the pollutants with which we are killing ourselves.

Respiratory disease cannot yet be reversed; early detection is the only defense at the present time, and detection is still in its infancy. Computer analysis, nuclear X-ray scanners, body boxes, bronchofiberscopes, spirometers, esophageal balloons, nitrogen tests, electron microscopes, and blood gas analysis are some of the devices now being used for detection.

Future treatment may be bound in enzymes or fluoro-carbons, and lung transplants offer a degree of hope.

Whereas modern technology has made sophisticated equipment available, this knowledge still needs to be implemented. How the medical profession, individual and community can work together both for the advancement of detection and treatment are subjects of the Pulmonary Disease show in "The Killers" series.

See the October issue of the JOURNAL for TV stations in your area carrying this series—Ed.

## **personal news**

DR. ROGER B. BURRUS, Nashville, was elected vice chairman of the Tennessee Section of the American College of Obstetricians and Gynecologists during a recent meeting in Honolulu.

DR. CYRUS C. ERICKSON, Memphis, was elected President of the Tennessee Division of the American Cancer Society at its recent annual meeting in Nashville.

DR. W. ALLEN EXUM, Kingsport, was elected vice chairman of the Board of Trustees of the Indian Path Hospital in Kingsport.

DR. GERALD M. FENICHEL, Nashville, Professor of Neurology and Pediatrics at Vanderbilt University, has been elected president of the Child Neurology Society.

DR. JAMES H. HENDRIX, JR., Memphis, Professor of Surgery at the University of Tennessee College of Medicine, has been installed as president of the American Society of Plastic and Reconstructive Surgeons.

DR. CURTIS P. McCAMMON, Knoxville, has been



elected chairman of the Regional Advisory Group of the Tennessee Mid-South Regional Medical Program.

DR. FRED G. McCONNELL, Kingsport, has been elected chairman of the Board of Trustees of the Indian Path Hospital in Kingsport.

DR. SAM P. PATTERSON, Memphis, has been elected chairman of the Tennessee Section of the American College of Obstetricians and Gynecologists.

DR. JACK E. PHELAN, Maryville, has been named to the Task Force to study workmen's compensation claims in Tennessee by Governor Winfield Dunn.

DR. JAMES T. ROBERTSON, Memphis, has been named the full-time chairman of the Department of Neurosurgery at the University of Tennessee Medical Units. He succeeds Dr. Francis Murphy who retired last year after holding the chairmanship for several years.

DR. CURTIS SEXTON, Lake City, has been named to a special task force of the State Health Planning Council to examine ways of controlling costs in health industry in Tennessee.

DR. CHARLES M. WENDER, Knoxville, recently spoke to 125 nurses at an all-day workshop concerning health diseases.

The following Tennessee physicians have been named Fellows in the American Academy of Family Physicians:

C. Lyle Durham, Jr., Bolivar; John C. Thornton, Jr., Brownsville; Robert H. Elder, Cedar Hill; John C. Ellis, Chattanooga; O. S. Luton, Clarksville; John J. Smith, Clinton; James T. DeBerry, William A. Hensley, Jr., Thurman Shipley, Cookeville; James S. Ruffin, Jr., Covington; William A. Crosby, Dickson; Edward H. Welles, Jr., Dresden; Royce L. Holsey, Jr., Charles J. Wells, Elizabethton; Robert H. Harvey, Erwin; William W. Pyle, Franklin; James S. Hastie, Goodlettsville; John L. Shaw, Greeneville; R. L. Wilson, Henderson; Thomas K. Ballard, Jackson; Robert G. Dennis, Byron W. Frizzell, Johnson City; Herbert J. Michals, Lyle R. Smith, Kingsport; Walter C. Beahn, Jr., Lloyd C. Davis, Frank J. Haufe, Robert F. Lash, John H. Saffold, James H. Waters, Jr., Knoxville; Villard L. Parrish, Lawrenceburg; Kenneth P. Brown, Lewisburg; John F. Manning, Maryville; James T. Bridges, James S. Byas, Tinnin Martin, Jr., William E. Metzger, James A. Moore, George E. Paullus, Memphis; Hubert P. Clemmer, Sr., James O. Fields, Milan; Lee Roy Barclay, Morristown; James T. Allen, Murfreesboro; Philip V. Daughtery, Irving R. Hillard, Nashville; William L. Phillips, Newbern; Wendell W. Wilson, Old Hickory; Emmett P. Mobley, Jr., Thomas C. Wood, Paris; William B. Acree, Ridgely; Harry L. Peeler, Selmer; Grace E. Moulder, Sue W. Johnson, Shelbyville; Lee Rush, Jr., Somerville; James B. Hannon, Eugene M. Ryan, South Pittsburg; Donald H. Bradley, Sparta; Warren G. Hayes, Raymond H. Webster, Springfield.

## announcements

### CALENDAR OF MEETINGS

#### STATE

1974

- Jan. 18-19 Tennessee Regional Meetings, American College of Physicians, Holiday Inn-Vanderbilt, Nashville, Tenn.
- Apr. 10-13 Tennessee Medical Association, 139th Annual Meeting, Gatlinburg, Tenn.

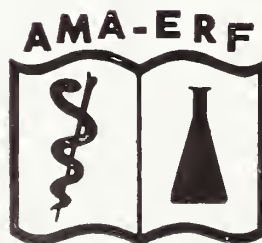
#### NATIONAL

1974

- Jan. 15-17 American Society of Surgery of the Hand, Hilton Hotel, Dallas
- Jan. 19-23 American Academy of Allergy, Americana, Bal Harbour, Fla.
- Jan. 19-24 American Academy of Orthopaedic Surgeons, Fairmont Hotel and Convention Center, Dallas
- Jan. 25-27 Southern Radiological Conference, Grand Hotel, Point Clear, Ala.
- Jan. 28-30 Society of Thoracic Surgeons, Century Plaza, Los Angeles
- Feb. 10-16 American Society of Contemporary Medicine and Surgery, Fontainebleau Hotel, Miami Beach, Fla.
- Feb. 11-14 American College of Cardiology, Hilton and Americana, New York
- Feb. 15-21 Thirteenth Congress of the Pan-Pacific Surgical Association, Hilton Hawaiian Village Hotel, Honolulu, Hawaii

\* \* \*

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## continuing education opportunities

*The continuing medical education accreditation program of TMA, has full approval by AMA's Council on Medical Education. If the continuing medical education program of your hospital or medical society is accredited by TMA's committee, you may receive for your attendance at its functions Category 1 credit for the AMA Physician's Recognition Award. If you wish information as to how your hospital or society may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee 37203.*

### Medical College of Georgia CME Courses

Date	Title, Location
	1974
January 24-25	Clinical Psychiatry, Medical College of Georgia, Augusta, Ga.
February 6-8	Basic Electrocardiography, Medical College of Georgia, Augusta, Ga.
February 7	Medicine and Religion, Medical College of Georgia, Augusta, Ga.
February 14-15	Neurology in Adults and Children, Medical College of Georgia, Augusta, Ga.
March 21-23	Geriatric Problems in Family Practice, Medical College of Georgia, Augusta, Ga.
March 28-29	Gastroenterology, The Atlanta Marriott, Atlanta, Ga.
June 13-15	Internal Medicine, Buccaneer Motor Lodge, Jekyll Island, Ga.

### American College of Physicians Regional Meetings, Postgraduate Courses

The ACP's one-to-three day Regional Meetings are designed to help practicing internists (and physicians in related specialties) keep abreast of new developments on the basic sciences and clinical medicine. They bring new advances in medical research from major research centers to local internists not able to travel to medical meetings outside of their own state and also provide a means for practitioners in the region to report to their colleagues on investigative work and clinical experiences of their own.

Averaging two-to-three days in duration, the ACP Postgraduate Courses provide opportunities for in-depth study of a wide range of subjects of importance to practicing physicians.

*North Carolina Regional Meeting, Dec. 6, 1973, Duke Medical Center, Durham, N.C. INFO: Joseph B. Stevens, M.D., 1017 Professional Village, Greensboro, N.C. 27401*

*Tennessee Regional Meeting, Jan. 18-19, 1974, Holiday Inn-Vanderbilt, Nashville, Tenn. INFO: Gerald I. Plitman, M.D., 1734 Madison Ave., Memphis, Tenn. 38104*

*Mississippi-Louisiana Regional Meeting, Feb. 15-16, 1974, Broadwater Beach Hotel, Biloxi, Miss. INFO: Guy D. Campbell, M.D., Veterans Administration Hospital, 1500 E. Woodrow Wilson Ave., Jackson, Miss. 39216*

*Alabama Regional Meeting, May 10-12, 1974, Point Clear, Alabama. INFO: Alwyn A. Shugerman, M.D., 1815 11th Ave., S., Birmingham, Ala. 35205*

### Network for Continuing Medical Education Schedule of Upcoming NCME Programs

Dec. 17-  
Dec. 30     **DIAGNOSTIC THORACENTESIS—PRINCIPLES/METHODS**, produced by the Center for Continuing Medical Education, Ohio State University College of Medicine, Columbus, Ohio.

**LYMPHANGIOGRAPHY IN DIAGNOSIS AND THERAPY**, with Robin Caird Watson, M.D., Chairman, Department of Diagnostic Radiology, Memorial Sloan-Kettering Cancer Center, and Associate Professor of Radiology, Cornell University Medical Center, New York.

**DIAGNOSING COMMON EYE INFLAMMATIONS**, with Virginia Lubkin, M.D., Ophthalmologist and Clinical Assistant Professor of Ophthalmology at Mt. Sinai School of Medicine, New York.

Dec.31-  
Jan. 13     **THE EXERCISE PRESCRIPTION**, with Nanette K. Wenger, M.D., Professor of Medicine, Division of Cardiology at Emory University School of Medicine, and Director of Cardiac Clinics and Program for Cardiac Evaluation and Medical and Vocational Rehabilitation at Grady Memorial Hospital, Atlanta, Georgia; and William L. Haskell, M.D. Physiologist, Stanford University Medical School Heart Disease Prevention Program, Co-director, University of Stanford Cardiac Rehabilitation Program, Palo Alto, California.

**SKYLAB: CLINIC IN ORBIT**, with Captain Joseph P. Kerwin, M.D., U.S.N., from NASA headquarters, Houston, Texas.



OFFICE TESTS TO CONFIRM CHRONIC OBSTRUCTIVE LUNG DISEASE, with Spencer Koerner, M.D., Chief, Pulmonary Medicine, Montefiore Hospital and Medical Center, New York.

For more information on NCME, write The Network for Continuing Medical Education, 15 Columbus Circle, New York, New York 10023.

See September issue of the JOURNAL for programming details.

## 1973 POSTGRADUATE COURSES

### Postgraduate Courses

The American College of Physicians Postgraduate Courses are arranged through the cooperation of the directors and institutions involved. Tuition fees, in varying amounts, are charged for each course. For further information and registration forms, write to: Registrar, ACP Postgraduate Courses, American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

### Vanderbilt University CME Course Listings

1974

*3rd Annual Dragstedt Surgery Symposium and Edwards Memorial Lecture* ..... Jan. 25-26  
*High Risk Pregnancy and Newborn Care* ..... March  
*Venereal Disease: A New Look at Treatment*

Tenn. Dept. of Public Health; U. of Tennessee;

Meharry Medical College ..... March 16

*Diabetes: 1974* ..... April

*13th Annual Seminar in Psychiatry*

Central State Psychiatric Hospital; Tenn. Dept.

of Mental Health; Meharry Medical College ... May

For further information contact:

Paul E. Slaton, M.D., Director

or

Marilyn Short, Administrative Associate

Vanderbilt Continuing Education

1100 Baker Bldg., 110 21st Avenue South

Nashville, Tennessee 37203 Tel. 615-322-2716

### Clinical Training Program For Practicing Physicians

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

### Participating Departments and Divisions

Anesthesiology ..... Bradley E. Smith, M.D.

Medicine ..... Grant W. Liddle, M.D.  
Cardiology ..... Gottlieb C. Friesinger, III, M.D.  
Chest Diseases ..... James D. Snell, M.D.  
Dermatology ..... Robert N. Buchanan, Jr., M.D.  
Endocrinology & Diabetes ... Grant W. Liddle, M.D.  
Gastroenterology ..... Steven Schenker, M.D.  
Hematology ..... Robert C. Hartmann, M.D.  
Infectious Diseases ..... Zell A. McGee, M.D.  
Renal Diseases ..... H. Earl Ginn, M.D.  
Clinical Pharmacology ..... John A. Oates, M.D.  
Neurology ..... Gerald M. Fenichel, M.D.  
Obstetrics & Gynecology ..... Paul W. Griffin, M.D.  
Pathology ..... Virgil S. LeQuire, M.D.  
Pediatrics ..... David T. Karzon, M.D.  
Psychiatry ..... Marc H. Hollender, M.D.  
Radiology ..... John R. Amberg, M.D.  
Surgery  
General ..... H. William Scott, Jr., M.D.  
Neurological ..... William F. Meacham, M.D.  
Ophthalmology ..... James H. Elliott, M.D.  
Oral ..... H. David Hall, D.M.D.  
Pediatric ..... James A. O'Neill, M.D.  
Plastic ..... John B. Lynch, M.D.  
Thoracic & Cardiac ..... Harvey W. Bender, M.D.  
Urology ..... Robert K. Rhamy, M.D.  
Cancer Chemotherapy .. Vernon H. Reynolds, M.D.

ELIGIBILITY: All licensed physicians are eligible.

ADMINISTRATIVE FEE: \$200.00 per week.

CREDIT: American Medical Association Physicians Recognition Award and American Academy of Family Physicians Continuing Education accreditation.

APPLICATION: For further information and application, contact:

Paul E. Slaton, M.D., Director, Continuing Education

1100 Baker Bldg., 110 21st Avenue South

Nashville, Tenn. 37203 Tel. 615-322-2716

### Tennessee Internal Medicine Specialists To Meet January 18-19

Specialists in internal medicine and related medical fields will hold a two-day scientific meeting on January 25-26, 1974, at the Holiday Inn-Vanderbilt, Nashville, Tennessee.

Prime purpose of the American College of Physicians, which is headquartered in Philadelphia, Pa., is the continuing education of practicing physicians. In addition to Regional Meetings, it sponsors a five-day national meeting, postgraduate courses and publishes the monthly *Annals of Internal Medicine*.

In charge of arrangements for the ACP Tennessee Regional Meetings of the American College of Physicians is Gerald I. Plitman, M.D., Memphis, Tenn., who serves as the ACP's representative in the State of Tennessee.

### Georgetown University Hospital

The Department of Psychiatry at Georgetown University Medical Center announces a Postgraduate Program for non-psychiatrist physicians in Family and Systems Theory and Family Psychotherapy. The course will meet quarterly in three-day sessions beginning in January, 1974. More detailed information may be



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obtained by contacting Murray Bowen, M.D., Department of Psychiatry, Georgetown University Medical Center, Washington, D.C. 20007.

## Current Obstetric and Gynecologic Practice

Department of Obstetrics and Gynecology  
The University of Texas Medical School at San Antonio  
Postgraduate Course—January 24-30, 1974

The course, given in 3 parts, is designed primarily as an aid to candidates for the American Board examination, but will be useful to practicing physicians who desire a resume of modern clinical practices in obstetrics and gynecology.

Part I—Gynecologic Pathophysiology and Oncology.

Part II—Gynecologic Endocrinology and Genetics.

Part III—Obstetrical Pathophysiology.

The \$250 enrollment fee includes a study set of 35mm Kodachrome slides, furnished to each registrant for home study in advance of the course, and cocktails and dinner on Saturday night, January 26.

The course will be limited to 150 students. Registration must be made by December 1, 1973. For further details and to register, write to C. J. Pauerstein, M.D., Dept. Ob-Gyn, the University of Texas Medical School at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284.

## Seminar in Pediatric Nephrology: Current Concepts in Diagnosis and Management

A Seminar in Pediatric Nephrology is being presented by the Department of Pediatrics at the University of Miami School of Medicine in Miami on January 2-5, 1974 at the Eden Roc Hotel, Miami Beach, Florida.

A comprehensive review of major problems in Pediatric Nephrology will be presented. Pathogenesis, pathology, clinico-pathological correlations, functional derangements and treatment of glomerulopathies structural defects and infections, and chronic uremia will be emphasized.

Inquiries should be directed to:

Division of Continuing Education  
University of Miami School of Medicine  
P.O. Box 875 Biscayne Annex  
Miami, Florida 33152  
(Tel. A/C 305, 350-6716)

## Symposium on Bone and Joint Radiology

The Departments of Diagnostic Radiology and Orthopaedic Surgery at the University of Kentucky Medical Center, Lexington, Kentucky, will conduct a symposium on Bone and Joint Radiology from May 1-3, 1974, immediately preceding the 100th Renewal of the Kentucky Derby. In the morning sessions a distinguished guest faculty will analyze radiographs

of selected unknown cases that demonstrate differential diagnostic features of various types of bone and joint pathology. Each registrant will be sent copies of the radiographs of each case prior to the meeting. Afternoon sessions will be devoted to informal discussions between small groups of registrants and a member of the guest faculty.

For further details and an application form, write:

Ronald D. Hamilton, M.D.  
Director, Continuing Education  
College of Medicine  
University of Kentucky  
Lexington, Kentucky 40506

\* \* \*

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# Rondomycin<sup>®</sup>

## (methacycline HCl)

**CONTRAINDICATIONS:** Hypersensitivity to any of the tetracyclines.

**WARNINGS:** Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

**Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

**Usage in newborns, infants, and children.** (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The anti-anabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

**PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal disease, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

**ADVERSE REACTIONS:** **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in the anogenital region.

**Skin:** maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

**Renal toxicity:** rise in BUN, apparently dose related (See **WARNINGS**).

**Hypersensitivity:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

**Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

**USUAL DOSAGE:** **Adults**—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. **Gonorrhea:** In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

**Eaton Agent pneumonia:** 900 mg daily for six days.

**Children**—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

**Concomitant therapy:** Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

**SUPPLIED:** 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

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## Whose Rights?

The American Civil Liberties Union has enunciated the principle that the individual is the sole owner of his body, that he has the "right" to use it as he desires, and that this "right" includes the use of drugs; and that society has no right to limit or proscribe what he may do with his body. As a matter of practicalities, society knows that drug users become addicts, addicts become pushers to support their disease, and that pushers make more addicts who participate in and raise the rate of crimes against society. Since recorded history, society has quarantined and segregated its members with contagious diseases and antisocial behavior. Nearly all societies draft or induct the physical bodies of their young men for the defense of that particular society, no matter what the type of government. Has society no rights over the individual person? A recently published study by something called the National Advisory Commission on Criminal Justice, Standards and Goals has stated that incarceration is a "miserable failure" in combating crime. It urges a reduction in the nation's prison system, reduction and/or elimination of prison sentences for crime, and immediate parole for nearly all prisoners. The Commission, set up by the government, rejects the ideas of prison as punishment or as protection for society by quarantine of the offender, and proposes the idea of rehabilitation as the only reward or consequence of crime or antisocial behavior.

Somehow, these groups seem to have lost their way and missed the point. John Donne

has written that no man is an island unto himself, but is a part, for good or bad, of the society in which he exists. A government is only a part of any society, and societies throughout history have used their governments to protect society from the unbridled actions of the individual. Today we seem to have lost sight of that function of government, and to be concerned only with rights of the individual and the rights of small groups of minorities. Our laws and our constitution prescribe prison as the *punishment* for crimes, not rehabilitation; and I do not believe that our society is yet ready or desires to do away with punishment for antisocial behavior or crime.

So today, who protects the rights of society? The courts are part of our government and yet they set themselves apart philosophically from the rest of government. They apparently see that they have a duty only to protect the rights of the individual and no canon to protect the rights of society. Who protects my rights, the rights of the great mass of society who do not participate in crime and antisocial behavior, but only suffer from it? Who protects the right of society to be free from internal turmoil and external subversion? I don't know who protects society's rights, but I believe that our courts, as part of our government, should give strictly equal concern to the rights of society as well as the rights of the individual. Perhaps when society's rights get an equal concern from our system of law and courts then the confidence of our people in our system of law and its courts will be restored.

JAMES H. CORWIN, M.D.  
3599 University Boulevard, S.  
Jacksonville 32216

Reprinted from *The Journal of the Florida Medical Association*, Sept., 1973

\* \* \*

## THX KXY

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# Pinworm therapy is often a family affair



**Contraindications:** History of hypersensitivity to thiabendazole.

**Warnings:** If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

**Precautions:** Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

**Adverse Reactions:** Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions



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## INDICATION | DOSAGE SCHEDULE

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*The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).*

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	1/2
50	0.5	1
75	0.75	1 1/2
100	1.0	2
125	1.25	2 1/2
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days.  This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

\*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



### **From The President's Committee On Health Education**

Creation of a National Center for Health Education to help individuals prevent sickness and enhance their health was recommended by the President's Committee on Health Education. The 17-man Committee appointed by President Nixon two years ago to examine and assess the state of the nation's health education effort met with the President on September 25 and reported that while the need and demand for health care services have been rising, health education has been neglected. Many, perhaps most major causes of sickness and death can be affected—and some prevented—by individual behavior, yet the whole field of health education is fragmented, uneven in effectiveness and lacks any base of operations. No agency inside or outside of government is either responsible for, or even assists in setting goals, maintaining criteria of performance, or measuring results.

Of \$75-billion spent last year for medical, hospital and health care—more than \$200-million a day—about 92 per cent is spent for treatment after illness occurs. Of the remaining amount, more than half is spent for biomedical research. Public health, prevention of illness, and health education share the balance, with health education receiving the short end—less than half of one per cent.

While a considerable number of employers have become concerned with acute, dramatic, work-related problems such as alcohol and drug abuse, business, industry and labor are not significantly involved in over-all programs that could contribute to sound off-job safety and health practices that could also benefit on-job attendance and productivity.

The Committee told the President that any changes or improvements in the delivery and financing of health care will be virtually nullified unless there is, at the same time, an improvement in health education—which means not just supplying information about health to people, but motivating them to accept the information and put it to work in their daily lives.

The Committee reported that school health education programs are handicapped by anti-

quoted laws, indifferent parents, unaggressive school boards, teachers poorly equipped to handle the subject, lack of leadership from government or the public, lack of funds, lack of research, lack of evaluation—all of those hobble a comprehensive program that could provide the nation's 55-million school children (one-fourth of the entire population) with adequate health education of an interesting, pertinent and objective nature.

While large amounts of so-called health information materials find their way into the schools, because they are free or inexpensive, such materials are rarely evaluated in terms of real value to the children. Often their use is based on their easy availability to the teacher—who sees that many are sponsored by reputable firms and assumes that they are effective.

Testimony before the Committee showed, however, that the quality of much health information material is questionable. Many materials are not pre-tested for intended audiences or evaluated by qualified experts, and much of it is outdated. School health education in most primary and secondary schools either is not provided at all, or loses its proper emphasis because of the way it is tacked onto another subject such as physical education or biology, assigned to teachers whose interests and qualifications lie elsewhere.

Evidence abounds that health education in schools is not effective, even when it is attempted. Nutrition studies show that teenagers, especially girls, often damage their own health and deprive themselves of vitality because of poor eating habits. Youngsters who once urged their parents not to smoke have become cigarette smokers as teenagers. And, of course, the high and rising incidence of venereal disease and the spread of drug abuse among teenagers are two other of the most urgent reasons for assigning a special priority to health education among school children.

The Committee singled out for particular attention the plight of the nation's 40-million low income families for whom it said communities have special obligations. Many of their health problems stem from sources outside their control and outside the range of medicine—bad housing, bad sanitation, poor nutrition, poverty, lack of education, lack of employment, etc. Their problems are social as well as medical, and the solutions lie in all of society as well as in the medical and health care field.



With all of those factors at work, the poor suffer medical problems caused by malnutrition; they have a higher rate of infant mortality; they experience a higher proportion of emotional, nervous and mental disorders; and their children have many more accidents involving burns or poisoning. In addition, bad housing and overcrowded and unsanitary conditions contribute to greater incidence of rheumatic fever, rheumatic heart disease, common respiratory diseases and complications such as middle-ear infection and meningitis.

Poverty might be likened to a hereditary disease in that children of the poor die earlier and in greater numbers, succumb more easily to childhood ailments, and more often become permanently incapacitated for school or employment—thus adding to the pool of poverty and unemployment that exacts a high price not only from its victims, but from all citizens.

The Committee collected data from more than 2,000 individuals, organizations, institutions and agencies in the course of its work, and found little or no coordination of effort or evaluation of the effectiveness of existing programs either in or outside of government on the part of any group working in the field.

Virtually all of the 10 major causes of sickness and death in the United States could be affected by individual behavior, but there is no national entity nor national effort which could help bring about desired changes in attitudes or motivation. This was a function the Committee said could be filled by the proposed new Center.

The proposed agency would be a private, nonprofit organization authorized by Congress and financed by both the federal government and private sources. Its principal functions would be carried out by five operating divisions:

1. The *Division for Research in Health Education* which would support basic research and encourage others to finance and support such basic work in motivation and behavior, try to find ways to overcome existing problems, and seek ways to persuade people of varying life styles to modify those styles, as well as to enhance the quality of their lives.

2. The *Division for Demonstration Programs in Health Education* would support and encourage new, innovative and imaginative programs in health education and would focus on objectives that are measurable, that emphasize the

prevention or moderation of illness or accidents which appear controllable through individual behavior.

3. *Clearing House for Health Information and Education.*

4. A *Division for Communications in Health Education* which would develop two-way communications between the Center and providers of health education services, and between the Center and the nation's mass media.

5. *Division for Community Health Communication Centers.*

This division would encourage the establishment of community centers for health education.

The Committee recommended that the Center be run by a board of 25 persons to be appointed by the President and confirmed by the Senate. The board should represent major groups concerned with health, as well as representatives of the consuming public, government, commerce and industry, labor, voluntary health organizations, insurance and pre-payment carriers and others.

Inquiries should be addressed to Victor Weingarten, Director, The President's Committee on Health Education, 801 Second Avenue, New York, New York 10017.

\* \* \*

**FAMILY PHYSICIANS, INTERNISTS, GENERAL PRACTITIONERS, ORTHOPEDIC SURGEONS, and OB-GYN** needed for various communities throughout Tennessee. All opportunities are located in towns with a modern, fully-equipped, JCAH approved hospital. **Contact: E. J. Ryan, Jr.,** Director-Medical Relations, Hospital Corporation of America, P.O. Box 550, Nashville, Tennessee 37203.



# Because you practice medicine in the Volunteer State...







*The Placement Service of the Tennessee Medical Association is designed to assist both physicians and communities and is offered as a public service. Further information is available from the Placement Service Office, 112 Louise Avenue, Nashville, Tennessee 37203, Phone 615/327-1451.*

## LOCATIONS WANTED

**FAMILY PRACTICE**, age 35, graduate of Hershey Medical Center, Pennsylvania State University College of Medicine in 1971, would prefer solo practice in East Tennessee preferably near Smokey Mountains. Presently completing residency. Married. Available July, 1974. LW-871

**GENERAL SURGEON**, age 35, graduate of New York Medical College in 1964, wants associate or clinical practice preferably in East Tennessee with 20,000+ pop. Board certified. Presently completing military service. Married. Available July, 1974. LW-872

**OTOLARYNGOLOGIST**, age 34, graduate of University of Oklahoma Medical College in 1968, wants associate practice in East or Middle Tennessee with 20,000+ pop. Presently completing residency. Married. Available July, 1975. LW-878

**OPHTHALMOLOGIST**, age 30, graduate of Louisiana State University Medical School in 1968, wants associate practice in Middle Tennessee city with medium pop. Married. Available July, 1974. LW-879

**DIAGNOSTIC RADIOLOGIST**, age 29, graduate of South Carolina University School of Medicine in 1970, wants assistant, associate or institutional practice in East Tennessee. Board eligible. Presently completing residency. Married. Available September, 1974. LW-896

**PATHOLOGIST**, age 38, graduate of Severance Medical College, Yonsei University (Korea) in 1959, wants assistant or associate practice in Tennessee. Board eligible. Married. Available July 1, 1974. LW-914

**PATHOLOGIST**, age 39, graduate of University of Indonesia in 1962, desires assistant or associate type practice preferably in East Tennessee but would consider other locations with 50,000+ pop. Married. Available February, 1974. LW-916

**GENERAL SURGEON**, age 32, graduate of the University of Tennessee in 1967, wants associate practice in East Tennessee metropolitan area. Presently in military service. Holds Tennessee license. Married. Available July, 1974. LW-917

**GENERAL SURGEON**, age 37, graduate of P. W. Medical College (India) in 1959, wants associate or clinical practice in medium-sized city in Tennessee. Married. Available November 1, 1974. LW-920

**ORTHOPEDIST**, age 33, graduate of Osmania Medical College (India) in 1967, wants solo or associate practice in East or Middle Tennessee city with 20,000+ pop. Married. Available February, 1974. LW-922

## PHYSICIANS WANTED

**FAMILY PHYSICIAN** needed as replacement in Medina, West Tennessee town of 800-1,000 located within 7-14 miles of three hospitals in Jackson, Humboldt and Milan. Preferred age 30-40. Industrial area ideal for general practice. Office space available. PW-316

**INTERNIST**, needed as associate in clinical type practice in Cleveland, an East Tennessee city of 70,000 total city and county pop. Preferred age 30-35. Professional corporation; new office presently under construction, excellent fringe benefits. Rapidly growing industrial community near well-equipped hospitals. Office space, equipment and housing available. PW-325

**GENERAL SURGEON**, willing to accept Obstetrics, needed as associate in McMinnville, an East Tennessee town with 25,000+ pop. Age under 40. Office space and equipment available. Community has two fully accredited hospitals, diversified industry and near recreational water facilities. Only one hour from two metropolitan areas. PW-344

**EMERGENCY ROOM PHYSICIAN**, needed to join professional corporation group in Bristol. Salary \$36,000 plus fringe benefits first year; full corporate partnership second year. PW-380

**FAMILY PHYSICIAN**, needed in Humboldt, West Tennessee city with 12,000+ city and county pop. Will offer guaranteed salary, profit-sharing and other fringe benefits. New HCA hospital in area. Excellent recreational area. Age desired up to 45. New clinic office space with equipment available. PW-381

**FAMILY PHYSICIAN** and **PEDIATRICIAN**, needed in Smyrna, located in Middle Tennessee. Native Tennessean desired. Age under 40. Some salary guarantee available. Office space available. PW-382

**INTERNIST** or **GENERALIST**, to fill full-time staff position in state hospital in Nashville. Need not be board certified; but must have or be eligible to obtain Tennessee license. PW-383

**FAMILY PHYSICIAN**, needed in Collinwood in southwest Tennessee. Office space available with county general hospital in area. Excellent hunting and fishing area. PW-384

**FAMILY PHYSICIAN**, **INTERNAL MEDICINE**, and **SUBSPECIALTIES IN INTERNAL MEDICINE**, needed in Maryville in East Tennessee for professional affiliation with availability of university teaching position, if desired. Excellent small college and basic educational facilities in county and in nearby Knoxville. PW-385

**INTERNIST**, **OB-GYN** and **PEDIATRICIAN**, needed in clinic practice in Paris, general hospital in area. Age desired 30-40. Twenty physicians presently in area. PW-386



# 1973 MEMBERS OF THE TENNESSEE MEDICAL ASSOCIATION

An alphabetical listing of members of The Tennessee Medical Association by County Medical Society is published as a service to the membership. The various membership categories are noted by special symbols. \* denotes Veteran Status; ‡ denotes Post-Graduate Status; † denotes Military Status.

## BEDFORD COUNTY MEDICAL SOCIETY

*Shelbyville*  
W. L. Chambers  
Albert L. Cooper  
John S. Derryberry  
Taylor Farrar  
Joseph H. Feldhaus  
Sue W. Johnson  
Grace E. Moulder  
Earl Rich  
Aubrey T. Richards  
B. Carl Rogers  
C. T. Stubblefield  
Sara Womack

## BENTON-HUMPHREYS MEDICAL SOCIETY

*Camden*  
W. H. Blackburn  
R. I. Bourne, Jr.  
Joe S. Butterworth  
*New Johnsonville*  
James J. Lawson  
*Waverly*  
Harold L. Blanton  
Wallace J. McClure  
Keith D. Peterson  
Dorris A. Sanders  
Joseph W. Stephens  
Arthur W. Walker

## BLOUNT COUNTY MEDICAL SOCIETY

*Alcoa*  
I. S. Henderson, Jr.  
Colin L. Kamperman  
*Louisville*  
Alex G. Chromis  
Cecil F. Mynatt  
*Maryville*

O. K. Agee  
Billy H. Blanks  
William J. Bovard  
John H. Bowen  
\*Keubel A. Bryant  
H. A. Callaway, Jr.  
James M. Callaway  
J. W. Christofferson  
Mary D. Cragan  
Clay Crowder  
William C. Crowder  
W. W. Crowder  
Lynn F. Curtis  
William E. Elliot  
Ted L. Flickinger  
R. H. Haralson, Jr.  
R. H. Haralson, III  
C. N. Hatfield  
Louis E. Haun  
Paul W. Hoffmann  
James T. Holder  
Cecil B. Howard  
John R. Huffman  
Homer L. Isbell  
Elgin P. Kintner  
Sam S. Lambeth  
Roy W. Laughmiller  
Julian C. Lentz  
Frank S. Lovingood  
John F. Manning  
Kenneth Marmon  
Gordon McCall  
David L. McCroskey  
N. A. McKinnon, Jr.  
James H. Millard  
Ronald A. Moss  
Robert D. Mynatt  
H. S. Nelson  
M. D. Peterson  
Jack Phelan  
James N. Proffitt  
Robert D. Proffitt  
Bainard P. Ramsey  
Robert W. Seaton  
O. L. Simpson, Jr.  
J. B. Smalley  
Iris C. Snider  
H. T. Vandergriff  
Lowell E. Vinsant  
J. A. Yarborough

*Rockford*  
Robert F. Leyen

## BRADLEY COUNTY MEDICAL SOCIETY

*Cleveland*  
Robert L. Allen  
John M. Appling  
Marvin R. Batchelor  
John M. Bryan  
Chalmer Chastain  
Robert H. Cofer  
Jack R. Free  
C. Richard Hughes  
Ivan C. Humphries  
Frank K. Jones  
Cecil H. Kimball  
C. A. Kyle, Jr.  
James C. Lowe  
Joseph McCain  
Haves Mitchell  
Sam Monger, III  
John Murphy  
John Parkinson  
E. Harris Pierce  
John Powell  
William Proffitt  
John A. Rogness  
Charles Romaine  
Fenton L. Scruggs  
William R. Smith  
W. C. Stanbery  
S. J. Sullivan  
Claud H. Taylor  
James R. Thurman  
Madison S. Trewitt  
James R. Van Arsdall  
Gilbert A. Varnell

*Copperhill*  
William O. Campbell  
W. C. Zachary, Jr.  
*Ducktown*  
William R. Lee

## BUFFALO RIVER VALLEY MEDICAL SOCIETY

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Parker D. Elrod  
Bertie L. Holladay  
T. James Humphreys

*Hohenwald*  
Harvey Anderson  
Humberto A. Florian  
Ivan Krohn

*Linden*  
Robert Markham  
Gordon H. Turner, Jr.

*Parsons*  
Charles M. Alderson  
Robert M. Fisher  
Dennis A. Savoie

## CAMPBELL COUNTY MEDICAL SOCIETY

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George L. Day  
Roy C. Ellis

*Jellico*  
Lee G. Durham  
Charles A. Prater  
Ned C. Watts

*LaFollette*  
J. D. Crutchfield  
M. L. Davis  
James C. Farris  
John C. Pryse  
Roscoe C. Pryse  
L. J. Seargeant  
Burgin H. Wood

## CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

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J. E. Adams, Jr.  
John W. Adams, Jr.  
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Edgar D. Akin  
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†Irl T. Alexander, Jr.  
Andres S. Alisago, Jr.

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Fred B. Ballard, Jr.  
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Frank S. Brannen  
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Neil Charles Brown  
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James S. Cheatham  
C. Robert Clark  
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Oscar H. Clements  
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\*Joe Tom Currey  
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Jimmy B. Davis  
Larry W. Davis  
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R. B. Donaldson  
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R. V. Fletcher  
J. M. Foley  
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N. G. Forlidas  
W. R. Fowler  
Guy M. Francis

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Joseph W. Graves  
William R. Green  
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M. W. Greifinger  
Wallace D. Grissom  
B. F. Grotts  
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R. B. Hagood, Jr.  
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John C. Hampton  
\*Elliott F. Harrison  
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Paul E. Hawkins  
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Robert Dale Hayes  
Thomas E. Hayes  
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Robert D. Hays  
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Peggy J. Howard  
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Harry E. Jones  
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David Bernard Karr  
Yutaka Kato  
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E. C. Lineberger  
P. H. Livingston  
Ira Morris Long  
Robert E. Mabe  
W. B. MacGuire, Jr.  
D. V. MacNaughton  
Luis G. Maldonado  
Tim Joseph Manson  
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\*Frederick E. Marsh  
\*W. H. Marsh  
Hossein Massoud  
Cooper H. McCall  
David P. McCallie  
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Edel F. McIntosh  
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Stanley R. Payne  
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Wesley Petty  
Robert J. Pitner  
W. E. Plache  
C. A. Portera  
W. H. Price  
M. C. Pruitt  
Walter Puckett, III  
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Joe Anne Quillian  
James G. Quinn  
Maurice S. Rawlings  
Charles Jackson Ray  
C. W. Reavis  
W. D. L. Record  
E. E. Reissman, Jr.  
J. E. Reynolds  
J. R. Reynolds  
Alexander Rhoton  
C. E. Richardson  
Deloris E. Rissling  
G. M. Roberts, Jr.  
A. P. Rogers  
William E. Rowe  
Esperanza A. Rowell  
James R. Royal  
Don Jere Russell  
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H. A. Schwartz  
Edgar L. Scott, Jr.  
Molly E. B. Seal  
Charles F. Seman  
Clarence Shaw  
George W. Shelton  
Leroy Sherrill  
\*W. J. Sheridan  
Edwin H. Shuck, Jr.  
George Lete Sivils  
F. J. Smiley  
M. J. Smith, Jr.  
S. P. Smith  
Pete S. Soteres  
R. T. Spalding  
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Thomas E. Taylor  
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David J. Tepper  
Jack Tepper  
M. O. Tepper  
Leonides Y. Teres  
Lloyd W. Thompson  
Paul C. Thompson  
Robert C. Thompson  
James E. Tinnell  
D. H. Turner  
A. Steven Ulin  
Louis Ulin  
F. C. Vallejo  
M. R. Vance  
\*W. E. VanOrder  
Roger Gordon Vieth  
Gus John Vlasis  
C. H. Von Cannon  
M. Von Werssowetz  
Harry Lee Walton  
W. Weathers, Jr.  
L. Spiers Whitaker, Jr.  
J. L. Williams, Jr.  
W. B. Willingham, Jr.  
Dexter L. Woods, Jr.  
Julian Macow Yood  
George G. Young  
M. M. Young  
Joseph I. Zuckerman  
*Bridgeport, Ala.*  
Horace L. Elmore  
*Cleveland*  
G. K. McAllister  
*Collegedale*  
Robert L. Jensen  
C. M. von Henner  
*Copperhill*  
\*Herschel H. Hyatt  
J. T. Layne  
*Dayton*  
Ernest A. Forsten  
L. F. Littell, Jr.  
James Jacob Rodgers  
*Dunlap*  
C. G. Graves, Jr.  
Arthur M. Owens  
*Franklin*  
\*Martin A. Meacham  
*Hixson*  
R. W. Boatwright  
Thomas R. Cox  
Olga D. Medina  
Oscar D. Medina  
Millard W. Ramsey  
*Jasper*  
James G. McMillan  
*Lookout Mountain*  
J. J. Armstrong  
James L. Caldwell  
Rudolph M. Landry  
Thomas Sparrow Long  
Robert W. Montague  
*Ooltewah*  
\*C. L. Lassiter  
*Pikeville*  
Thomas G. Cranwell  
Rufus S. Morgan  
*Rossville, Georgia*  
W. D. Crawley, Jr.  
*Saltville, Va.*  
Irvin S. Miller  
*Signal Mountain*  
O. M. Derryberry  
B. B. Holt, Jr.  
\*M. F. Langston  
Allen D. Lewis  
T. H. Rybachok  
H. G. Sibold  
A. Y. Smith, III  
Phillipp C. Sottong  
*South Pittsburg*  
Paul M. Burd  
J. B. Hackworth, Jr.  
J. B. Havron  
William L. Headrick  
Hiram Beene Moore  
E. M. Ryan  
Viston Taylor, Jr.



Whitwell  
 \*Cleo Chastain  
 W. G. Shull  
 Wildwood, Ga.  
 ‡R. D. Neufeld

# **COCKE COUNTY MEDICAL SOCIETY**

## *Newport*

E. R. Baker  
 A. J. Garbarino  
 D. H. McConnell  
 Drew A. Mims  
 William B. Robinson  
 Glenn Shults  
 F. M. Valentine, Jr.

# **COFFEE COUNTY MEDICAL SOCIETY**

## *Manchester*

C. H. Farrar  
 Howard Farrar  
 Seung Hoo Lee  
 John A. Shields  
 Coulter S. Young

## *Tallahoma*

Ralph Brickell  
 Marvin C. Fraley  
 Bruce E. Galbraith  
 Edwin E. Gray  
 C. B. Harvey  
 Ho Kyun Kim  
 James M. King  
 Charles W. Marsh  
 Earl E. Roles  
 Claude C. Snoddy  
 Charles H. Webb

## *Nashville*

W. D. Calhoun

# **CONSOLIDATED MEDICAL ASSEMBLY**

## *Alamo*

J. H. Donnell

## *Bells*

Charles Hickman  
 Russell W. Mayfield

## *Bemis*

A. N. Williams, Jr.

## *Bolivar*

Harvey H. Barham  
 William Bell

\*Douglas L. Brint  
 C. L. Durham  
 James I. Elliott  
 Charles L. Frost

\*James K. Tate, Jr.

## *Brownsville*

\*Thomas C. Chapman  
 Bobby D. Hale  
 David E. Stewart  
 J. C. Thornton, Jr.  
 J. K. Welch, Jr.

## *Bruceton*

\*Robert T. Keeton

## *Camden*

Alvin T. Hicks  
 Robert L. Horton

## *Friendship*

Lamar A. White

## *Grand Junction*

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## *Harrison*

Edward C. Barker

## *Henderson*

Darrell King  
 Oscar M. McCallum  
 R. L. Wilson

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 J. H. Crenshaw  
 T. M. Crenshaw  
 Albert H. Fick

Nelson C. Harrison  
 George E. Spangler

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 N. B. Bhat  
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 James Barker  
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 \*Swan Burus, Sr.  
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 Robert C. Hall  
 Walton W. Harrison  
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 Robert S. Hill  
 Ben F. House  
 G. B. Hubbard  
 Leland M. Johnston  
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 Fred Looper  
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 Harold T. McIver  
 A. L. Middleton  
 Jesse Miller, Jr.  
 Henry N. Moore  
 Alfred J. Mueller  
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 Roy M. Neudecker  
 George Pakis, Jr.  
 L. G. Pascal, Jr.  
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 J. A. Price, Jr.  
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 W. H. Roberts  
 Barnett Scott  
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 R. T. Tucker, Jr.  
 Jimmy F. Webb

F. E. Williamson, Jr.  
 Wayne H. Wolfe  
 George Wyatt  
 Paul E. Wylie  
 Harold R. Yarbro

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A. H. Gray

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 Maurice N. Lowry  
 Warren C. Ramer  
 Warren Ramer, Jr.  
 Jack C. Stripling  
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## *McKenzie*

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 James H. Robertson  
 S. S. Walker, Jr.

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\*Robert H. Morris

## *Memphis*

J. F. Albritten

## *Milan*

Hubert P. Clemmer  
 James O. Fields

\*P. D. Jones

Delza Penaranda  
 James H. Williams  
 Phillip G. Williams

## *Saltillo*

Howard W. Thomas

## *Savannah*

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 A. G. Churchwell  
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John D. Lay  
 Thomas V. Roe  
 Howard Whitaker, Jr.  
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 Harry Peeler  
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## *Somerville*

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 \*John W. Morris  
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 Karl Byington Rhea  
 Lee Rush, Jr.

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 E. C. Crafton, Jr.  
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 James W. Hall  
 C. L. Holmes  
 Leon Koen  
 C. S. Patterson  
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## *Whiteville*

Aubrey Richards

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 Joe E. Burton  
 James T. Callis  
 J. T. Campbell, Jr.  
 R. E. Cravens  
 Carl T. Duer  
 Paul A. Ervin, Jr.  
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 H. F. Lawson  
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 Fred W. Munson  
 \*Stuart P. Seaton  
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## *Monterey*

Jerome Sag

## *Pleasant Hill*

\*Laurence A. Chrouch  
 \*Margaret K. Stewart

## *Rockwood*

J. W. Lindsay

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## *College Grove*

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## *Hermitage*

\*John M. Lee

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 Zillur Athar  
 Charles B. Beck  
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 H. T. McCall  
 Barton McSwain  
 Conchita T. Pecache  
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 Divina Tan Po  
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 Joseph W. Scobey  
 Sylvia R. Seamands  
 Norman L. Sims  
 Choon Duck Son  
 V. W. Stuyvesant  
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 A. S. Wachtel  
 Harry Witztum

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Inpow Hong  
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- R. R. Martinez  
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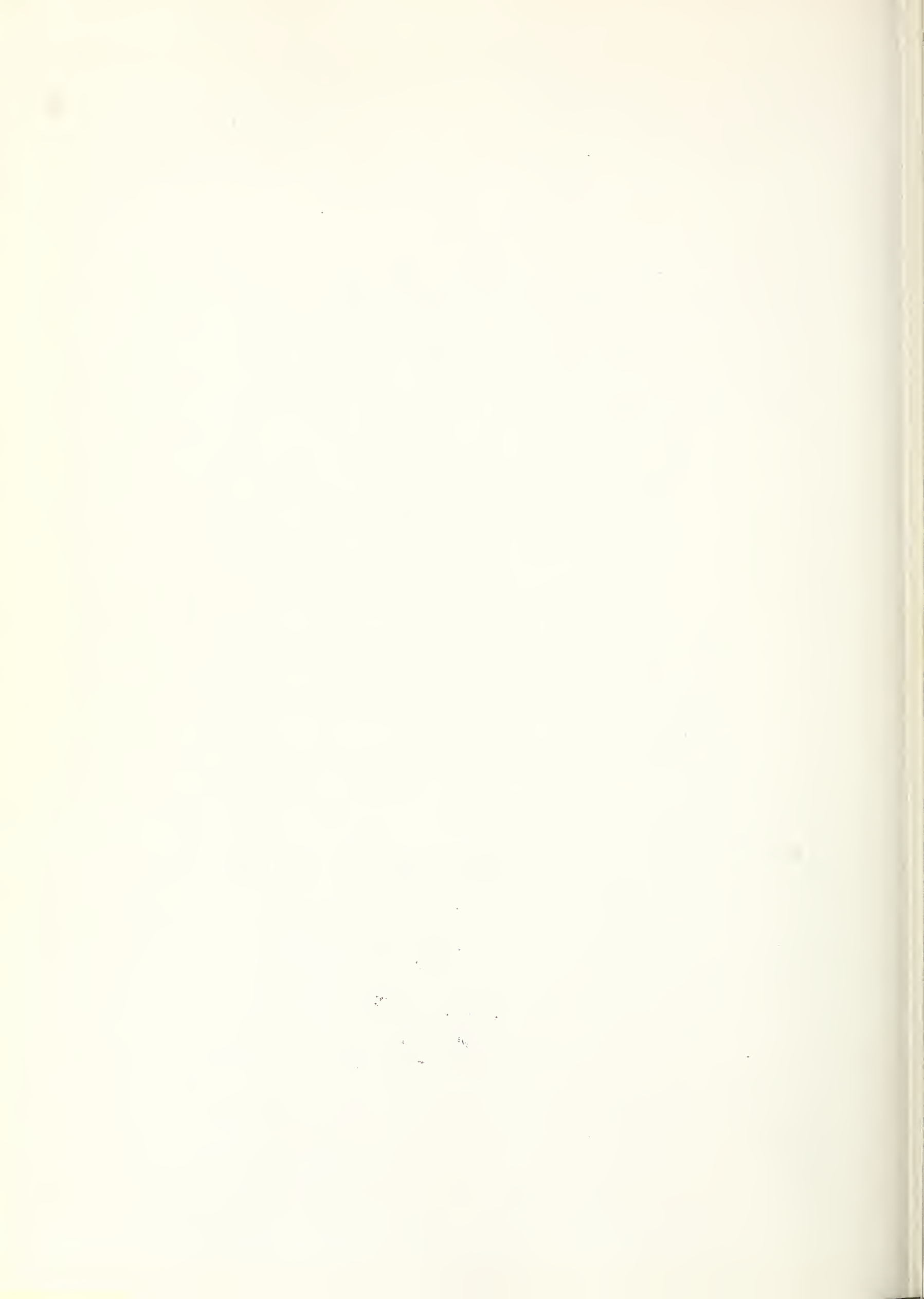














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